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ART. I.—*An account of the Epidemic Fevers of Natchez, Mississippi, in the years* 1837–'8–'9. BY SAMUEL HOGG, M. D.

NOT only the medical profession, but the public in general, have a claim on the physicians of Natchez for at least a passing notice of the malignant epidemics which have scourged this devoted city during the years 1837–'8–'9.

No one of the faculty having undertaken the task, I deem it my duty, however feeble my efforts may prove, to give to the public such information on this interesting subject as my limited means will enable me, hoping that my brethren will take the remarks for what they may be worth and will withhold their criticism.

In advance of the observations proposed to be made on the two epidemics, it may be proper to give a topographical description of the city of Natchez, the character of the seasons, and a general view of the diseases immediately preceding and subsequent to them, together with a general account of their treatment.

Many of the facts upon which these observations are founded have come within the knowledge of the writer, the others have been communicated by medical men of the first respectability and may be relied upon.

Natchez is situated on a commanding bluff, which forms the east bank of the Mississippi river, in latitude thirty-one degrees thirty-four minutes, and longitude ninety-one degrees twenty-four minutes, west from Greenwich, and fourteen degrees twenty-three seconds west of Washington city. It is laid off in regular squares, intersected by streets of moderate width and drained by sewers. The site of the city was originally undulating, with a delightful landscape extending back south and east—the country around for many miles is much injured by large gullies or bayous—the city is almost surrounded by them.

In 1834 the citizens commenced extensive graduations, removing the hills and filling the bayous, of which there were many—great improvements in building also commenced, which not only brought in much lumber, but made almost all the surrounding country mortar-beds or brick-yards. The population increased rapidly, principally composed of the laboring classes, stout, athletic and unacclimated, and the number of inhabitants in 1837 exceeded six thousand.

What is known as "under the hill at Natchez" extends from the termination of the bluff to the margin of the river, a distance of from one to two hundred yards in width, and

from a half to three-fourths of a mile in length up the river—its fixed population is between five and six hundred.

On the west side of the river the country is low and level, intersected by bayous, lake Concordia and other smaller lakes, which seem to have been at some time the bed of the river. There are now many large cotton plantations on that side in a high state of cultivation, and the blacks are generally healthy and seem contented. The city is supplied with good provisions, excellent cistern water, and ice in the summer. The citizens generally were temperate, orderly and industrious in their different occupations during those years.

The weather in 1836 was not in the extreme, either in temperature or in rain, the highest rise of the thermometer was 92° for a few days only at 3 o'clock, P. M., in July and August. The lowest was 24° for two or three days in November and December—there was no snow during the year.

There were 113 days on which it rained and 63 days on which there was lightning and thunder; much rain fell previously to the month of August, and the Spring months were disagreeable.

From the following meteorological register of the years 1837-'8-'9 I am indebted to our distinguished fellow-citizen and accurate observer, Dr. Henry Tooley, and deem it sufficiently important to give it in full:

METEOROLOGICAL REGISTER KEPT AT NATCHEZ, 1837.

1837.	*Thermometer.* 6 A. M.	12 M.	6 P. M.	*Barometer.*			cl.days	cl'dy.	rain	thaw	fog.	snow.
January,	42,5	48	51,8	29,76	29,78	29,72	11	7	9	1	2	2
February,	43	53	57	29,72	29,65	29,69	8	8	10	2	2	0
March,	51,8	61	64	29,70	29,66	29,69	7	7	12	0	5	0
April,	57	65	71	29,72,8	29,71	29,67	11	14	5	3	0	0
May,	65	75	79	29,72,2	29,71,3	29,65	23	4	4	5	0	0
June,	74,2	82,1	86	29,66,9	29,71,2	29,66	5	18	7	0	0	0
July,	76,5	84,3	88,3	29,74,7	29,77,1	29,74,1	0	21	10	11	0	0
August,	75,1	84,9	87,1	29,74,1	29,75,8	29,73,2	0	25	6	1	0	0
September	71,1	73,5	87,6	29,77,3	29,78,1	29,74	4	16	10	3	0	0
October,	61,8	68,7	72,2	29,86,4	29,91,1	29,87,6	8	18	5	2	0	0
November	53,2	64,1	72,2	29,81,2	29,84,1	29,81	11	13	6	0	0	0
December	46,6	55,6	59,1	29,84	29,72	29,78	7	15	9	0	0	0
An. mean.	60,7	67,9	72,4	29,84	29,74	29,76	95	166	93	28	9	2

1838.	*Thermometer.* 6 A. M.	12 M.	6 P. M.	*Barometer.*			cl.days	cl'dy.	rain	thaw	fog.	snow.
January,	47,6	52,2	55,6	30	30, 2	30, 5	5	18	8	1	0	0
February,	37,6	41,9	47,6	29,92	29,91	29,87	4	12	7	3	2	5
March,	55,6	60	66,8	29,79	29,71	29,73	2	9	9	3	14	0
April,	61,8	71,6	74,6	29,74	29,74	29,70	2	19	4	3	5	0
May,	62,2	70,2	73	29,66	29,69	29,67	1	17	13	3	0	0
June,	72,6	85,5	88,1	29,69	29,73	29,67	1	27	2	1	0	0
July,	76,4	82,5	85,1	29,80	29,77	29,79	0	19	12	10	0	0
August,	74,3	83,6	84,5	29,75	29,76	29,71	0	19	12	13	0	0
September	66,5	76,2	78,9	29,68	29,72	29,71	10	14	6	2	0	0
October,	56,5	65,3	65,4	29,80	29,80	29,79	8	15	8	1	0	0
November	46,2	56,8	55,3	29,88	29,89	29,87	5	11	7	2	7	0
December	37,9	46,2	50,2	30,03	29,93	29,91	5	13	7	0	3	5
An. mean,	57,9	66	68,8	29,89	29,89	29,79	93	193	92	42	31	10

1839.	*Thermometer.* 6 A. M.	12 M.	6 P. M.	*Barometer.*			cl.days	cl'dy.	rain	thaw	fog.	snow.
January,	43,4	52,7	58,8	30,02	29,97	29,88	0	21	10	2	0	0
February,	45,5	51,9	55	29,99,7	30,10	29,98	5	13	10	0	0	0
March,	53,4	59,7	64,8	29,90	29,91	29,90	2	19	8	2	2	0
April,	68,9	74	82	29,73	29,71	29,67	2	25	3	2	0	0
May,	68	80	81	29,71	29,73	29,70	4	20	7	7	0	0
June,	74,8	84	88	29,77	29,78	29,78	0	26	4	4	0	0
July,	75,4	86,5	89,6	29,69	29,70	29,70	0	23	8	5	0	0
August,	74,2	84,5	86,5	29,73	29,74	29,71	2	23	6	7	0	0
September	68,7	79,8	82,7	29,80	29,80	29,78	0	23	3	1	4	0
October,	63,8	74	77	29,82	29,82	29,50	0	20	3	0	8	0
November	48,3	54,2	55,7	29,01	30,89	29,60	3	14	10	1	3	0
December	44,3	47,2	49,1	29,89	29,78	29,82	8	9	9	0	5	0
An. mean,	61,1	69,1	72,5	29,82,5	29,82,5	29,69,9	26	235	82	31	21	0

The measles prevailed during the winter and spring of 1836: the excitement was open and where treatment was necessary, it generally yielded to emetics of calomel and ipecac 8 or 10 grs. each, followed by gentle laxatives of Epsom salts and

senna, or calc. magnesia, anodyne sudorifics of Dover's powder, or paregoric, and ipecac wine, at night, with the free use of mucilaginous drinks.

A few cases terminated in pneumonia, or acute bronchitis requiring depletion to the extent of making a decided impression on the system or relieving pain and difficulty in breathing, assisted by mild laxatives, blisters, and, if not speedily relieved, alterative doses of calomel and ipecac, repeated every second, third or fourth hour, until the secretions of the liver and mucous membranes improve or a slight ptyalism commences. The combination of Coxe's hive syrup and paregoric, was used as an expectorant, given in elm, flaxseed or gum arabic mucilage. In a few enervated habits, the eruption did not develope itself, or it receded suddenly, with general coldness of the surface, livid complexion, difficult respiration and great restlessness. In such cases, stimulating baths of mustard, or frictions with pepper or mustard in hot brandy, were advised, and full portions of camph. vol. alkali and calomel were repeated as circumstances indicated. The compound which I employed was the following:

℞. camph. and vol. alk. each 5 grs., calomel 5 to 10 grs. mixed, to be given every 2 or 3 hours. As a drink, the decoction of polyg. senega or warm toddy, until the excitement was diffused, or the symptoms were relieved.

Many who had been previously affected with measles, had slight catarrhal fever.

The treatment of bronchitis with the exception of blisters to the throat or neck, and mild gargles, differed but little from that of pneumonia.

Influenza occurred late in the spring amongst the blacks on a few plantations, of quite a malignant character—cough, sore chest, pain in the head and back, a white or blue furred

tongue with red edges, and moderate thirst. In most cases there was no chill, action of the pulse moderate, breathing difficult; but in some, the excitement seemed crippled, and irregularly diffused, extremities cold, and the stomach irritable with great nausea and restlessness, and after the third or fourth day sub-inflammation of the whole mucous membrane with diarrhœa frequently closed the scene.

In the open form of the disease, moderate depletion, emetics of cal. and ipecac. or lob. inflat. laxatives, alterative doses of calomel and ipecac, counter irritants to the chest and extremities, expectorants, and Dover's powder at night, generally relieved. In many cases, regardless of the *endemic* character of the disease, the patients were either suddenly prostrated by a single large bleeding, or under frequent small bleedings, drastic purges of calomel, aloes, and scammony or jalap, and premature blisters, generally sunk into a typhoid state, with engorged lungs, and rattles, and died about the sixth or eighth day.

A mild remittent, and intermittent fever, with griping and loose bowels, (in those who had fever during the previous fall) succeeded the influenza and yielded to the usual remedies.

From 1st of May until July, there was little disease, some cases of bowel complaint in children, with consecutive determination to the head, ending in spasms. Emetics of calomel and ipecac, 4 grs. each, followed by minute portions of the same as an alterative, with mucilage, generally cured—leeches or cups to the abdomen or head, were very useful to some.

July was more sickly, and early in the month, there were some severe cases of fever on the flat lands with great determination to the head; general and local depletion, the cold douche, with brisk mercurial cathartics relieved most of the cases. Coughs and bowel complaints were common amongst chil-

dren, and there were a few cases of chronic dysentery the sequelæ of measles.

On the high-land plantations there were a few cases of malignant double tertians, and more sickness in town than usual: diarrhœa, dysentery and whooping cough amongst the children—fever amongst grown persons quite obstinate and attended with severe hiccough. Bleeding and mucilaginous drinks relieved the head, the hiccough and the heavy exhalation from the skin and bowels, calomel restored the healthy secretions, and as soon as there was a sufficient remission, quinine in from 2 to 5 gr. doses, every second hour completed the cure.

The diseases in August did not vary either in form or violence from those of July.

In September, disease increased considerably, in the form of remittent fever, dysentery and frequent cases of malignant double tertian, the severe paroxysm commencing at 10 o'clock, A. M., and the light one at 4 P. M., on the following day. Some died in the first cold stage sinking immediately into fatal collapse, and but few survived the third chill, unless it had been preceded by very prompt and active treatment. In most cases, the stomach and bowels took on choleric action; some after one or two convulsions, sunk into profound coma, and in every case when there was any show of reaction, it was feeble, irregular, and terminated in an icy coldness of the surface, the tongue moist, very pale and clean, or covered with a blue moist fur, and the thirst moderate.

This form of disease I fear has been too often mistaken (in some parts of this State) for Dr. Armstrong's congestive typhus and treated accordingly. They are antipodes, so far as respects the pathological condition of the organs, but I shall decline saying any more on the subject it being rather irrelevant.

In the above form of disease, where the patient was seen

in the first paroxysm of torpor, if there was some effort to react the remedies which were used with most success, were emetics of calomel and ipecac, followed by large alterative doses of the same, at intervals of one, two or three hours, until secretion was procured from the bowels, with frictions perseveringly applied to the extremities, and warm drinks until reaction was established. Whenever the action began to decline, full doses of quinine every second or third hour, alternated with ten grain doses of calomel, with sinapisms of mustard to the extremities, prevented a return of the chill and torpor. The medicines were then continued in smaller quantities, and at longer intervals, until the secretions became natural and the patient convalescent. The following is my mode of administering the quinine:

℞ sulph. quin. grs. x.

Pip. nig. ol. grs. i. M. ft. pil.

One to be taken every hour, or once in two hours.

When the patient was not seen before the second chill, the extremities were icy cold, stomach very irritable, contents of the bowels liquid; a warm mustard, pepper or salt bath or mustard sinapisms to the stomach and extremities, blisters, quinine as above prescribed alternated with calomel twenty grains, sulph. morph. 1-6 grain, together with warm stimulating drinks, seemed to snatch the patient from the jaws of death, and relieved him, contrary to the expectations of friends or physician. Injections of strong salt-water were used to empty the bowels when necessary.

Many auxiliaries were tried but seemed of no effect—a slight ptyalism sometimes supervened but rather expedited than retarded the cure; convalescence was speedy and permanent.

To many readers it may seem, that too much has been said on this part of the subject, but it is one of the first im-

portance to the southern practitioner, and although some may say that less calomel and quinine would have relieved the patient, I found from ample experience, that there was no time to be lost, neither should there be any scruples about doses.

The blacks suffered more than the whites, probably from two causes, viz: the want of timely aid, and the more enervated state of the system.

There was more disease amongst the acclimated than there had been since 1831.

After severe frost, on the 20th, 21st and 22d of October, disease was more of the remittent character and bore the lancet and antimonials with good effect.

There were a few cases of complicated rheumatic states of fever in the course of the month.

But little disease prevailed in November, until the 15th, when the influenza commenced; at first very mild, but it gradually increased in violence, assuming the type of pneumonia, with severe pain in the chest, hard cough; in the worst cases the expectoration was white, thin and frothy, in the more mild it was of an olive cast, sometimes much mixed with blood; there was also oppressed breathing, either very torpid or loose bowels, high arterial excitement, white or yellow furred tongue and some thirst. Amongst the white population it required the same treatment as in the previous spring—amongst the blacks it seemed to produce sudden prostration, assuming all the phenomena of typhoid pneumonia, and requiring the treatment heretofore mentioned.

There were during the winter and spring, many anomalous symptoms, such as pain and suppuration of the ears, and of the frontal sinus, tooth ache, inflammation and suppuration of the cellular membrane, together with diarrhœa, and dysentery, all, it is very likely, dependent upon the peculiar epidemic constitution of the atmosphere.

In February there were a few cases of tonsilitis, some scarlatina, also small-pox of the distinct kind—a few of the cases were pronounced varioloid, but there seemed to be no marked distinction in them, or in the treatment required—only two or three died.

During the spring, anasarca prevailed amongst the unacclimated blacks—it generally yielded to one moderate bleeding, cathartics of jalap, or gamboge, and cream of tartar, alterative pills of calomel and squill, and the tincture of muriate of iron.

From April to August, the city and country were more exempt from disease than they had been for many previous years.

THE DISEASE OF 1837.

This has, by common consent, been called "yellow fever," but it frequently ran its course, either terminating in death or recovery, without the appearance of yellowness of the skin or eyes, which was not therefore a distinctive character of the disease.

It has been called "black vomit," but many cases proved fatal unaccompanied by that symptom, neither was that fluid found in the stomach on dissection.

It was not as some have supposed, a high or malignant grade of bilious fever—the whole surrounding country being more exempt from that disease than usual, (particularly in 1839,) there being almost an entire absence of moisture, one of the principal agents in the generation of miasma—also in most cases of recovery, the first satisfactory evidence of amendment was the plentiful secretion of a dark acrid bile, which in many instances excoriated the rectum in its passage.

It was not any of the modifications of typhus, and there was no evidence on dissection of any affection of the mesenteric or other glands.

In no case of dissection did Dr. Pollard find any degeneration of the glandular system.

Dr. Pollard saw four cases in the hospital of evident congestion, two on the first day which carried off the patients in five or six hours, the other two died later but proved of the same nature, without hiccough, black vomit or any signs of inflammation. He saw others in whom there was complete prostration of all the powers of life, without his being able to trace the disease to any important organ, the patient dying in a few hours.

It was not essential gastro enteritis, there being many cases of death without any appreciable symptom from which inflammation could be suspected, neither did dissection shew anything to justify such conclusion.

If it were neither of the foregoing diseases, the question necessarily arises—what was it? I must briefly answer that it was an assemblage of symptoms or rational signs, indicating the modified condition of such organs, as previous predisposing causes might have made obnoxious to the morbid influence of a specific cause, not cognizable by our senses, a poison sui generis, infecting a certain portion of atmosphere. A disease produced by such a cause, must be sui generis, proving fatal in many cases without the intervention of active inflammation, or the patient becoming gradually convalescent without any of the critical phenomena that could enable the most acute observer to form a correct prognosis as to the result.

The disease, after a few hours of listlessness and indisposition to exercise, commenced with a well marked chill, succeeded by free open reaction, frequent, full, resisting pulse,

pain in the head, back and limbs, red eyes, restlessness, watching and frequently delirium, terminating in profound coma before death, considerable thirst, moist, clean, or slightly furred tongue—irritable stomach, with soreness about the pyloric orifice on pressure, and in a few hours great nausea and vomiting. The bowels were generally slow, discharges of a light grey or of a blue muddy cast; the skin was commonly hot and dry, and when yellowness attended, it generally began about the second or third day, and in fatal cases, gradually increased until death—in the cases of recovery it subsided as the secretions improved. In nearly every fatal case it became yellow after death. The eyes were seldom yellow.

When black vomit was present, it usually began from twenty-four to forty-eight hours before death, and was in most cases accompanied by hiccough—the mucus which had been previously thrown up clear and mixed with small white flocculi, began to show small black specks mixed with it, rapidly increasing until it assumed its specific character, and was in most cases belched up without any effort of the patient. In some of the hospital cases the same kind of matter was discharged per anum. Hiccough was frequently distressing when there was no black vomit.

Hemorrhage was not frequent, but when it occurred from the nose, it was generally favorable—when from the mouth or bowels it was in most cases fatal—the urine was scanty and high colored, and sometimes very dark, resembling black vomit. Changes from dry to cold damp weather were very unfavorable, most of the severe cases proving fatal, and most of the convalescent relapsed unless they were very prudent. There was a suspension of new cases for a few days, late in October, which induced numbers to return to the city who had left it, and put those off their guard who had remained. Very

soon, however, the disease recommenced, and there were a number of deaths.

Males were more frequently attacked, and the disease was more unmanageable in them, than in females or children. The black population suffered least.

The young, stout, robust, and intemperate were most obnoxious. The acclimated were generally exempt, but there were a few cases amongst those who had had the disease in other places, and none of them proved fatal.

The first death in a well marked case, was on the 7th of September, nearly in the centre of the city, where the disease first appeared—there were but few cases under the Hill—the last death was on the 4th of December, and the whole number of deaths was 257.

The population of the city at the commencement, exceeded 6000, and but few left it during the prevalence of the disease.

Something may be expected on the subject of prognosis, but such was the peculiarity of the disease, and so insidious were the approaches of death, that the most experienced observer would be deceived; in fact, there were none of those critical circumstances attending most other diseases, and the remissions were very short and obscure. For several days, the organs seemed to resist and throw off its influence in proportion to their recuperative powers, the stomach and skin being generally the last to resume their normal functions. After a change of weather and two or three frosts the disease subsided.

In the *commencement* of this as of most other malignant endemics, many died of the number severely attacked, although few of the Faculty acknowledged the loss of patients. The treatment of former seasons did not succeed—antimonials as

emetics, or to answer other indications, not only failed, but in many instances seemed to do evident injury.

In the forming or early stage of the disease, after prompt depletion, in which the blood was florid, sometimes the the emetic of calomel and ipecac, followed by castor oil, or senna tea seemed to check its progress, softening the pulse and skin, relieving the head and promoting the secretions, and if judiciously assisted by local depletion from the head, spine or region of the stomach, by counter irritant and alterative portions of calomel or blue mass and ipecac or James' powder, with drinks of cold mucilage, ice water or lemonade, the chance for the patient's recovery seemed better than from any other plan. Both general and local bleeding was freely used in the hospital by Dr. Pollard with decidedly good effect.

Many auxiliaries were used as palliatives, to allay the irritation of the stomach, and to promote the specific secretions of the skin, kidneys, &c., but the ice, mucilage, milk and lime water, soda and charcoal, were the only ones which seemed to prove useful. In the hospital the oil of amber seemed to have a good effect, particularly in the only case of black vomit in which recovery took place. Seidlitz powders, castor oil, or senna tea, were useful laxatives after the secretions improved; unless the patients was much prostrated. Injections of warm water, gruel or salt water were used in that event.

During the insidious respite, or remission of the disease which frequently occurred on the third or fourth day, quinine combined with calomel, blue mass, and camphor, or oil of black pepper, and other stimulants, was tried by some, and thought very beneficial, whereas in the opinion of others, it seemed not only unprofitable, but evidently injurious, the disease again recurring with increased violence, black vomit coming on and soon closing the scene. Dr. Pollard informs me

that most of the patients taken to the hospital in the early stage of the disease, who had been previously treated with calomel and quinine without free depletion had raving delirium, red eyes, hot skin and great thirst, and, if in the advanced stage, they had low muttering delirium, dry brown, sharp pointed tongue, which they protruded with difficulty. The head was very hot and there was acute pain in the stomach, but seldom any black vomit. When there was free depletion, and calomel was combined with the quinine, it was not so injurious, but he thinks did no good.

The "post hoc, ergo propter hoc" experience in the profession has no doubt in this, as in many other diseases, done much mischief, for every candid practitioner must acknowledge that he has frequently seen cases of recovery where the recuperative powers of the system have resisted the most preposterous prescriptions, and his after and more correct experience, has made him blush for his previous ignorance.

After the subsidence of the epidemic, the city and country were very healthy, and such disease as prevailed, did not as usual seem to wear its livery in the slightest degree. From December, 1836, up to August, 1837, there was a period of severe trial with the faculty, almost amounting to starvation. The alarm was then again sounded, and the second epidemic commenced.

EPIDEMIC OF 1839.

The first case of this disease was taken to the Hospital from "under the Hill," but it soon became general; the first death was on the 27th of August, and the last on the 20th of November, and the whole number reported by the sexton, was 235, a few died who were taken to the country, and in two instances

others of the family where they were, had the disease who had not, from their statement, been within the circle where it prevailed. The population of the city at the commencement, did not exceed five thousand—many left the city immediately, and by the first of October, the number was not greater than 1500.

The acclimated and the blacks suffered more than in 1837—many were attacked who had previously had the disease, a few of whom had it severely, but there were not many of them who died.

The attack was more insidious than in 1837; many seemed quite exhilarated and boasted of their good health, but a few hours before they were attacked; but in most cases, there was great depression of spirits, indifference to surrounding objects and a horror which seemed gradually to increase, until there was a slight coldness of the hands and feet, and a sensation of chilliness down the spine—this condition was indefinite, lasting from a few minutes to several hours, before the succeeding phenomena were developed.

In the mild cases, the excitement was free and well diffused, pulse varying from eighty-five to one hundred in a minute, full, firm and resisting—the skin hot and dry and seldom yellow—pain in the head, back and limbs moderate—some restlessness and watching, but rarely delirium—the tongue was moist and clean, or covered with a thin white fur--considerable thirst; after a few hours the stomach became irritable and sore to the touch, succeeded by frequent vomiting of a fluid differing but little in character from that of 1837—the bowels very slow, the urine scanty and high colored.

In such of those cases as proved fatal, the soreness of the abdomen, vomiting, obstinacy of the bowels, and thirst increased, the secretion of urine was entirely suspended and

death closed the scene, frequently without the appearance of black vomit.

Hiccough was common, and in some cases there seemed to be a morbid secretion of gas by the stomach more distressing than the vomiting.

In the more violent form of the disease there was no appreciable chill—the skin was moderately warm or cool, and of rather a leaden hue, the excitement was irregular and crippled, pulse varied from one hundred to one hundred and thirty, with throbbing of the carotids, shrunk features, cold or cool extremities, little or no pain, great oppression of the stomach with soreness to the touch in some cases, the tongue was moist, pale, expanded, with a pale blue fur and red edges, thirst and distressing vomiting, the bowels even obstinately costive, and when evacuations were procured, they were of a dark or blue muddy cast, or liquid and almost colourless. The urine was scanty, thick and dark, resembling black vomit, or it was totally suspended.

In some of those cases black vomit came on very early, and death occurred frequently within the first three days—many seemed to die without the signs of inflammation being present, and evidently from the exhaustion of the nervous influence. In the last named cases there was frequently no black vomit. The skin became invariably yellow after death.

Hæmorrhage occasionally came on, and when from the nose it was favorable, but when from the mouth, bowels or kidneys it was always unfavorable and most frequently the precursor of death. It seemed to be the effect of calomel in but one case that came to my knowledge. In the hospital practice both in 1837 and 1839, where the patient was not freely bled in the early stage and mercury was given so as to produce salivation, it was generally severe and frequently brought on

hemorrhage from the mouth or bowels, and the convalescence was slow and imperfect—when he was freely bled the calomel answered every purpose as a cathartic and there was no necessity for it as an alterative, or for quinine.

The disease from the 16th of November, became gradually milder and ultimately subsided without any remarkable change in the weather.

The rational signs of improvement whereby the physician could form his prognosis as to the probable event of the disease, were more obscure than in 1837—the convalescence was gradual and progressive without any specific crisis.

I saw but one sporadic case—it occured in February, the patient had been sick six days and was mortified, death taking place in ten hours after I saw him. In this case there was no symptom indicating to me, the approach of death—the mind was calm, pulse open, soft, and eighty strokes in a minute—skin warm and moist, stomach quiet, but the bowels liquid.

No prophylactic except temperance in all things seemed to prevent the disease—calomel was relied on by some, but several were attacked when under its influence, and some died when highly salivated although it was generally favorable.

TREATMENT OF THE DISEASE IN 1839.

In the first cases which occurred, the attack was so insidious, the deaths so frequent, under circumstances which, when present in the ordinary fevers of the country, would not warrant such a result, that the faculty were astounded, the firmest of them were thrown off their balance, and it became a perfect matter of experiment with them. Some gave antimonial emetics, and as an after treatment, relied upon cupping,

mild laxatives, mucilage, counter irritants, and diaphoretics—some bled moderately, cupped, gave no cathartics, used injections, counter irritants and diaphoretics, palliatives to relieve the stomach, and quinine—others gave strong mercurial cathartics, followed by alterative doses of calomel, camphor and quinine, stimulating diaphoretics, with warm teas: many other plans were tried not necessary to notice.

After the panic had somewhat subsided and reflection and reason resumed their empire, the faculty began to take a different view of the disease, and the most successful treatment so far as I saw and was able to learn from the very intelligent physicians of the place, was a judicious modification of the following outline:

In the mild form, when the reaction was free and open, one full general bleeding, (the blood generally florid or of a scarlet red,) had a very happy effect, in allaying the pain, thirst, irritation of the stomach and obstinacy of the bowels—this was usually followed by a full dose of calomel alone, or combined with ipecac or James' powder, and if it failed to operate as a cathartic in six or eight hours, castor oil, senna or some other laxative was given to promote its operation. Cupping followed by mustard sinapisms to the stomach, gave great relief—ice water, mucilaginous lemonade, or cold toast water, taken in small quantities, generally allayed thirst, and a few alterative doses of calomel or blue mass, either alone or combined with camphor and quinine, improved the secretions, modified the succeeding exacerbation and seemed so far to disarm the disease, that the after treatment, consisted of attentive nursing, an occasional Seidlitz powder, castor oil, magnesia, or injections, to regulate the bowels, with an occasional anodyne sudorific at night. Some continued the alterative until gentle ptyalism commenced, and there were but few cases in which it was excessive or proved injurious.

In the more violent or irregular congestive form of the disease, the first and all important object was to diffuse the excitement, relieve the oppressed organs, and enable the brain and nervous system to supply and regularly distribute a sufficient quantity of nervous influence, to excite the secreting organs to resume their functions, and thereby prevent the sudden and unaccountable deaths, or the permanent local congestions, which either quickly resulted in active inflammation with its consequences, or became a focus of irritation, which although more protracted in its influence generally proved fatal.

There were two plans adopted to fulfil the necessary indications, each of which had its advocates amongst the most intelligent of the profession, both claiming a reasonable share of success as the result; but as the illustrious Sydenham has said "we do not always cure disease in the best way."

The first was (in the early or forming stage of the disease) to administer full and frequent doses of quinine combined with blue mass or calomel, and camphor, oil of black pepper, or other diffusive stimuli—cupping the region of the stomach, sinapisms of mustard to the extremities, frictions and external warmth, continued until the action was diffused; after which if any important organ was threatened, or other circumstances indicated, general bleeding was resorted to, together with alteratives, laxatives and other remedies, as advised in the mild or open form of the disease.

The second plan was to detract blood, in small quantity, and repeat it according to circumstances, in the forming stage. The blood was generally of a dark modena cast and difficult to obtain, but after reaction was developed it was very florid and buffy. In one or two cases it had a peculiar fœtor very offensive to those who were present. In the hospital depletion was resorted to in frequent small quantities to

procure reaction with the happiest effect. To this succeeded the administration of calomel and ipecac, so as to make a moderate impression on the stomach; this was followed, in a few hours, by laxatives of calomel, magnesia and rhubarb, salts and senna, castor oil or Seidlitz powders; cupping the region of the stomach or skin which was always useful: sinapisms to the extremities and warmth were likewise employed to the surface; and when the reaction became fully established one full general bleeding. This allayed the gastric irritation and thirst, and prepared the organs to resume their functions under the administration of the proper secernents. Blisters were sometimes used, but were rarely beneficial, producing severe strangury, which nothing seemed to palliate. Patients, indeed, frequently died under its influence. Magnesia in sweetened water, carbonate of soda, ice water, or milk and lime water, were the best palliatives in irritable stomach—charcoal was used, but without any marked advantage. In the hospital the oil of amber seemed to answer better than any other remedy. Relapses were more frequent than in 1837, and in most cases fatal.

A very fine white vesicular or miliary eruption sometimes appeared about the neck and chest, and was always a fatal symptom.

Very dark vitiated evacuations from the liver and mucous membranes of the bowels were generally the first well marked evidences of improvement—these were followed by such as were of a more healthy cast, and in some cases continued for several days before the gastric irritation entirely subsided.

I am not prepared to treat of the ætiology of this fever. Its pathology may be inferred from the symptoms, the effects, as detailed, of different modes of treatment, and the autopsic examinations of my intelligent young friend, Dr. Pollard, (resi-

dent physician of the Hospital,) which are annexed to this paper.

All the bodies examined after death, were those in the hospital. They had generally been paupers, of loose, intemperate habits; most of them young or of middle age, whose organs no doubt, from previous habits, were predisposed to congestion, or to active inflammation from the application of any exciting cause, and many of them in 1837, had not been depleted during their out-door treatment, but had taken freely of calomel and quinine: hence some allowance ought to be made for the frequent extensive structural lesions found in the organs, many of which might not have taken place under different circumstances.

I shall give Dr. Pollard's Report as handed to me by himself.

"Dissections were generally made four hours after death, by myself assisted by Dr. T. C. Lawrence, both in 1837 and 1839. The skin became yellow, after death, when it was not previously so; the back and under parts of the limbs, placed in a horizontal position, were of a dark red and sometimes ecchymosed appearance. On opening the head in those who had been bled, or the disease had been suffered to run an uninterrupted course, the dura mater was natural, the tunica arachnoides and substance of the brain were natural; in some of those cases, a tea-spoon full of serum was found in the lateral ventricles. The lungs were natural, filled as much as common with air, and with blood collected in their lower parts as they lay. The substance of the lungs was generally healthy. In the abdomen, the stomach, when laid open, was found to have undergone some alteration in almost every case; red patches were to be found in some, as large as a dollar, in others smaller; they were generally about

the pyloric orifice, but rarely in the cardiac portion. The organ in most instances, contained nothing except what had been administered to the patient.

The red spots were also very generally to be found in the duodenum. The other bowels presented a healthful appearance.

The liver was paler than usual, the gall-bladder contained a small quantity of green bile. The spleen was also pale. The kidneys were generally healthy, but in three or four cases they contained mucus.

I observed that in those who had not been bled or who had taken quinine, the brain had suffered. The arachoid was engorged, and the ventricles almost always contained an excess of serum. On making a section into the substance of the brain, small points of blood appeared in numbers. The red spots on the mucous membrane of the stomach and duodenum were large and numerous. In those who died of black vomit, sometimes the same was found in the stomach and bowels, but the mucous membrane was entire, only showing the marks of inflammation. These observations were made in 1837.

The cases that I examined in 1839, presented pretty much the same features in the stomach and liver, only in a more aggravated form. The brain this year was seldom altered from its natural character. In some two or three, serum was contained in the lateral ventricles. The lungs in many were filled with blood, and the auricles of the heart, particularly engorged. The pericardium contained more liquid than is natural. The stomach and duodenum were highly inflamed (except in the cases to be mentioned,) the mucous membrane in some was softened and covered with a viscid mucus. The liver was pale and the ducts filled with mucus, The gall bladder seldom had much bile in it and in some it was filled

with a gelatinous mucus. The bowels, with the exception of the duodenum, had no traces of disease, even in those who had voided blood, except that the membrane was softened.

The bowels contained sometimes blood, and sometimes mucus. The kidneys were also filled with mucus which would run from them when squeezed, as from a sponge filled with water.

In the cases that died from want of reaction in the commencement, I could observe no very marked diseased condition. The brain looked quite healthy, and also the viscera of the chest. The stomach was slightly altered about the lower orifice, small red points were seen, which were also to be perceived in the duodenum. The kidneys in these cases were natural. The mucous membrane of the bladder was healthy in all the subjects."

ART. II.—*Cases of Fracture of the Skull presenting some singular phenomena.* Read before the Medical Society of Tennessee, and reported for the Western Journal. By WILLIAM G. DICKINSON, M. D., of Nashville, Tennessee.

J. D. aged twenty-two years was thrown by a horse while at full speed, and was found lying on his side; his head protected by a felt hat, was about ten inches from a large post. It was *believed* that the head came in contact with the ground and post at the same time, but no external sign indicated that his head had been injured; no puffiness, or the least abrasion of the harry scalp could be detected by the most careful examination.

He was insensible, breathing slowly, but not laboriously;

in this respect there was no change while he lived. On the second, third, fourth and fifth days he swallowed whatever was put in his mouth, his urine and fæces were passed involuntarily, and he died on the tenth day after receiving the injury.

EXAMINATION TWENTY HOURS AFTER DEATH.

The whole of the hairy scalp was removed, the pericranum adhered to the bone throughout, except where it had been separated by the surgeon.

On raising the skull about two ounces of semi-transparent fluid escaped. The longitudinal and lateral sinuses were filled with dark coagulated blood. The veins of the cerebrum were but partially filled even at their base, while those of the cerebellum were distended almost to bursting, and the whole mass of the cerebellum was enveloped in three or four ounces of semi-purulent fluid slightly tinged with blood.

On raising the dura mater from the base of the skull a fracture was found extending entirely across its base through the petrous portion of the temporal bone, and reaching about one inch above the external ear on each side. On the anterior part of the petrous portion of the temporal bone of the right side was an isolated portion of the bone, but connected with the line of the fracture on one side, about half an inch in width and three-fourths of an inch in length, which was forced from within outward upon the internal ear, as if by a blow of some small instrument impinged on the internal surface of the bone. On the left portion of the pars petrosa was a similar isolated piece also connected with the line of fracture, of about the same width as the former and more than one inch in length, its longest diameter corresponding with the lateral

diameter of the skull. No remark was made or conjecture hazarded, by the professional gentlemen present, as to the cause which had produced this novel appearance.

These pieces were detached from the dura mater, which, except a slight effusion externally, where the vessels were torn from the isolated portions of bone, seemed in a perfectly healthy state; as it did also along the whole extent of the fracture; and the brain and other parts adjacent had the like appearance of exemption from the effects of the shock, which produced such fearful effects on the contiguous bony structure.

Case 2d.—W. aged about twenty-five years, received a blow from a flat surface on the left side of his head, parallel to the superior orbital process; the force of the blow was expended on the os frontis where it, the temporal and parietal bones join. He was standing, and did not fall, but reeled and staggerd backwards—he died on the third day.

Autopsy.—The skin and external integuments were entirely sound; nor was there the least vestige of fracture on the external parietes of the cranium. But on the superior orbital plate of the os frontis, was a fracture which included a piece of the orbital process, one inch in length and three-fourths of an inch broad. The isolated piece was irregular and angular; its longest diameter from left to right. This pressed upon the orbit of the eye from within, as if the blow had been received on the inside of the skull, from above downwards: and the lamellated nature of the fracture showed that it could never have been forced in upon the brain, the sides being scaled off from within outward and lying upon the part from which it was separated, not unlike the squamous suture, the broadest part being external. The portion of the fracture most distant from, and opposite to the point of injury, was perpen-

dicular and nearly straight, constituting as it were the base of the fractured piece. The dura mater over this fractured portion was sound and there was nothing in its appearance to indicate the injury which the bony structure had sustained beneath.

I have purposely passed over the symptoms and treatment; it is sufficient to say that the cases though widely distant, were treated by professional men, eminent for their practical and scientific acquirements. As the symptoms gave no indications of the injury which was found to exist after death, of course the treatment had no reference to it. Doctor R. C. K. Martin was attending surgeon, and by him the examination was made, in the presence of Dr. Felix Robertson, President of the Medical Society of Tennessee, and myself. Both bear testimony to the correctness and fidelity with which the facts are here stated.

I wish simply to call the attention of the profession to the fact, that the arch of the cranium may give way at any point *between* the point of injury and the point of resistance, always supposing the side opposite to the point of injury, to be the point of resistance, and that whenever it does so give way, from the very nature of its form, the parts isolated must of necessity be forced from within outward; and that it is always liable to this kind of injury when the surface is large on which the blow is received, and particularly so if the impinging force is in a degree less than that which would break through the arch at the point where the injury is received. It is also probable that the bones of an old person or a very young one would not suffer in this way; the former would be too brittle, and the latter too soft; and both would give way at the point of injury or not at all. It may be that the shock which the substance of the brain must sustain in receiving an

injury of this character may always be fatal, as it was in the cases narrated. Still my object will be attained by calling the attention of the Society to the fact that the skull is liable to this kind of injury.

Nashville, May, 1840.

ART. III.—*Proofs of the health-preserving properties of the Jussieua Grandiflora or Floating Plant.* By SAMUEL A. CARTWRIGHT, M. D. of Natchez, Miss.

To a considerable number of plants all ages have ascribed therapeutic properties, or such as cure disease. I propose to introduce to the notice of the profession a plant possessing hygienic properties, or such as prevent disease.

The region of country where I found this plant growing in the greatest abundance is in Lower Louisiana, the most southern portion of the territory of the United States, except the peninsula of East Florida. It lies between the 29th and 30th degree north latitude, and between the 80th and 92d degree of west longitude. New Iberia, Donaldsonville, and New Orleans are situated near the northern boundary of this region, and the Gulf of Mexico constitutes its southern limits. With due allowances for the large lakes, bays and indentations of the Gulf of Mexico, it contains about seven thousand square miles—a territory about equal in extent to the State of New Jersey. Not more, however, than one-third is arable land; the other two-thirds being subject to annual inundation from the Mississippi river, and composed of cypress and palmetto swamps, small lakes, bayous and *Prairies Tremblant* or shaking prairies. The tillable land is exceedingly fertile and is

but a few feet above high water mark. There is nothing like a hill in this whole region of country with the exception of a few Indian mounds. The soil is entirely alluvion of recent formation. The high or arable land lies on the margin of the lakes and bayous. It is not, generally, more than from half a mile to a mile in width; and gradually slopes back from the bluff or high banks of the lakes and bayous with a gentle declivity of three or four feet to the mile to a cypress swamp, beyond which is a palmetto swamp, then comes a *prairie tremblant*, in the centre of which is commonly a small lake. Beyond the *prairie tremblant* is another palmetto swamp, then a cypress swamp, then comes high land again, extending from the swamp with a gentle ascent to another bayou or lake. The bayous are very numerous; some of the principal ones are the Lafourche, the Blue, Terre-bonne, Cailliou, the Black, Buffalo, Alligator, Boeuf, Teche, Atchaffalaya, &c. Barataria, Palourd, and Tampelier are the largest lakes. Berwicks, Atchaffalaya and Vermilion are the most important bays. The water in all the lakes and bayous, except Lafourche, is entirely stagnant and has no motion but what it receives from the winds, except very near the Gulf of Mexico, where a slight motion is given to it by the tides. Even when the Mississippi river inundates the low lands and swamps, there is little or no current in the water which finds its way out of the banks of that river. The bayou Lafourche is nothing but a natural canal or aqueduct leading from the Mississippi river to the Gulf of Mexico by a shorter route. It is a small embrasure of the Mississippi river, and is only navigated by barges and light steam boats. It differs from these bayous, properly so called, which are nothing more than stagnant canals or natural channels not generally wider than the Schuylkill, extending from the south in nearly parallel lines to the Gulf, and

remarkably straight in their course; or connecting the different lakes with one another.

The first quarter or half quarter of a mile on the right and left of the bayous, in the uncultivated parts, is generally covered with a magnificent growth of live oak, *Quercus virens.* The branches of this tree spread out horizontally to the distance of thirty feet or more from its trunk. The balance of the high land, extending to the cypress swamp, is covered with a lofty forest rendered almost impenetrable in its natural state by reason of its dense undergrowth of cane. The cane is from ten to twenty feet in height. The culms of the cane are not generally more than an inch or an inch and a half in diameter. The culms stand so close together that a bird can with difficulty fly through them, and an active man can scarcely travel half a mile an hour in the thicket.

The principal trees which overshadow these cane-brakes are remarkably large and tall. The long gray moss, the *Tillandsia Usneoides*, several feet in length, suspends itself in thick clusters from their boughs. The wild grape vine, which is often near a foot in diameter, ascends their trunks and spreads itself among their branches; and the ligneous rope, *the liandre*, often out-climbs the grape vine, and having tied the branches of the trees together, descends again to the earth, takes root, climbs another tree or twines its smooth and polished surface around the parent stem. Besides the live oak and several other species of the *genus quercus*, the principal trees of the arable, or high land, are the sweet gum, *Liquidambar Styraciflua*, the blue and white ash, *Fraxinus Quadrangulata*, and *F. Acuminata*, hack-berry, *Celtis Crassifolia*, the Pacane tree, *Juglans olivaeformis*, which bears the nut called pacanes, or pecons; the honey locust, *Gleditschia Triacanthos;* the cotton-wood tree, *Populus Argentea*, a very

different tree from the *Populus Canadensis*, also called cotton-wood tree, of more northern latitudes. The cotton-wood tree of the south, though a tall tree, two or three feet in diameter, differs, I believe, from all other trees, in having roots like the grasses—the roots being fibrous, not racemose, as other trees, but consisting almost entirely of long slender fibres, or radicles, without a caudex. The sassafras of the genus laurus, grows in this district of country to a large size, its trunk being often two or three feet in diameter. The sumach belonging to the rhus genus, although a dwarf in size, is deserving of notice, as it is a certain indication that the land on which it is found growing is not subject to inundation.

The cypress swamps in rear of the arable or high land, have no undergrowth of cane—but are thickly beset with *cypress knees*, rising from two to six feet in height, erroneously supposed by Michaux, to be excrescences of the root of the cypress tree, the *Cupressus Disticha*. They differ as much, however, from the root of the cypress tree, as the misletoe differs from the oak on which it is found growing. They are evidently parasites of the root, entirely different, either from the cypress tree or its roots, being double hollow cones closed at both ends, one apex descending several feet perpendicularly into the earth, and the other as many above the earth's surface. They are constituted of a dense alburnum, covered with bark, having no branches, either above or below, and no connection with any other substance, except the radicles of the cypress root, to which they owe their origin. The swamps in which these singular vegetable productions grow, are principally shaded by cypress trees, the lords of a southern forest, which afford a most durable and valuable timber. The palmetto swamps lie almost posterior to the cypress swamps, and extend to the margin of the prairie-tremblants. These swamps

do not contain any large trees, except the wild olive, a tree which grows in very wet places, has an ash-colored bark, smoother than the cypress, and bears a berry about half the size of the olive, and very like it. Its leaves fall off soon and turn red before falling; but the principal growth of the low swamps is the palmetto, or dwarf, fan palm, *Chamærops Humilis*, rising from five to ten feet in height, having a long fusiform root. It would seem that the *flabellum*, or fan-like expansion, which constitutes the external portion of this shrub, exists originally in miniature in the root. Because if the top of the root be cut off in the spring, it will nevertheless send its flabelliform leaves, not with acuminate points, as in the natural state, but premorse, as if they had been clipped off with a pair of shears. When land containing a growth of palmetto, is reclaimed by ditches, the practice pursued by some of the planters is to thrust an iron crow-bar, perpendicularly into each palmetto root, before putting the land in cultivation, otherwise the root, which is too deep to be extirpated by the plough or the hoe, will continue to send up premorse leaves which will be very troublesome. It is somewhat singular, that the palmetto land, when reclaimed from inundation, is the very best land in the world for cotton. The cotton plant, on palmetto land does not grow tall, but is short-jointed and contains more bowls or pods by one-third, than the cotton plant on cane land.

The lakes and bayous of lower Louisiana abound with fish and contain great numbers of alligators; also alligator-gars, a fish without scales, partaking of the nature of an alligator and a cat-fish. Though much smaller, they are far more dangerous to persons who venture into the water than the alligator. Nearly the whole surface of many of the bayous and a considerable surface of many of the lakes, in all that part of Louisi-

ana below 30° of latitude, are covered, in a greater or less degree, with the Jussieua Grandiflora, the plant, which possesses hygienic or health-preserving properties. Besides the Jussieua Grandiflora, I observed a considerable number of other aquatic plants, both phænogamous as well as cryptogamous. Among the aquatic plants were the *Callitriche aquatica* or water star grass; the *Lemna minor* or Dutch meat; the *Riccia natans* or floating liverwort; the *Nympha cærulia* with its broad leaves; the *Isnardia palustris* with its grass like leaves; besides the *Rafflesia arnoldia*, the *Lemnochæris Humboltii*, the *Hydrocotyle vulgaris*, and a few others. On the bays, the fucus natans or gulf weed, was very common. Nearly all the aquatic plants, with the exception of the Jussieua grandiflora, the Lemna Minor, and the Fucus Natans, had more or less attachments to the soil by means of their roots. The fucus natans was only found in salt water. The lemna minor is a very small and insignificant plant. The Jussieua grandiflora, however, is exclusively aquatic. It is a large flowering plant, which grows three or four feet above the surface of the water, and gives the water on which it grows the fallacious appearance of a natural meadow. The root is several feet in length, is jointed, about half an inch in diameter; lies horizontally on the water, but an inch or two below its surface. Each joint sends up the culm or stem of the plant, and around each joint of the root; at the foot of the stem are a great number of radicles or hair-like roots, some of which float on the surface of the water, and others dip down towards the bottom or fasten themselves to old logs. These radicles or little roots, often have adhering to them an inky kind of paste or substance, which they collect from the water, and no doubt constitutes the nourishment or proper aliment of the plant to which they belong. The roots, radicles and radicle leaves of

the Jussieua Grandiflora, form such a dense covering to the water, as to constitute a bridge sufficiently strong to enable snakes and grass-hoppers to cross over the stagnant pools in which it grows. I travelled forty miles in a canoe through bayous and lakes, which were almost entirely covered by the Jussieua Grandiflora and intermixed with a number of other aquatic plants. I was often unable to see any water at all, except in the track made by the canoe. Although very frail, and easily pushed aside or broken, this floating plant afforded considerable resistance to the progress of the canoe. On the wide lakes and bays, the winds often detach large masses of this and other aquatic plants, which being driven about by the waves, and one detachment forced upon another, constitute what are termed *floating Islands*—which are often strong enough to bear the weight of a man in a recumbent posture. The Jussieua Grandiflora, together with the other aquatic plants mentioned, are not only found on the lakes, bays and bayous, but they constitute the sub-stratum of that singular and non-descript species of savannah called the *prarie tremblant*. These prairies are constituted in the first instance of a vast assemblage of aquatic plants. On this vegetable stratum, intermixed with the debris of other vegetable substances, a number of grasses and terrestrial plants like parasites, fasten themselves and grow. The whole is formed into a complete vegetable mattress, strong enough to support a man in a crawling position, but not sufficiently firm to enable him to walk upright. It is also too firm to admit of the passage of a boat or canoe. When the foot is placed upon it, the whole mass trembles; hence the French name *prairie tremblant*, and the English name *shaking prairie*. It is said that if a hole is cut in it, fish may be caught with a hook and line.

The facts on which I rest the hygienic or health-preserving properties of the Jussieua Grandiflora, are—

1st. That it purifies all stagnant water in which it grows:

2. The remarkable exemption of the inhabitants of that section of Louisiana from malarious or miasmatic diseases.

1. The water on which the Jussieua Grandiflora grows differs essentially from other water, similarly circumstanced, where this plant does not grow. Although I visited the country in which the plant is indigenous, during a very dry and hot season, in the month of June, I found the stagnant water of the lakes and bayous, inhabited by this plant, as pure to the sight, taste and smell as if it had just fallen from the clouds. Near the Gulf of Mexico, however, the water of the bayous was impregnated with salt. The water also of Bayou Black, although fresh, had a darkish appearance—owing to a chemical affinity between some ferruginous matter in the soil, and the oak trees and leaves which had fallen into the water. The water of Bayou Black, although of a dark color, was free from any disagreeable taste or smell. It contained no green scum, and was considered to be equally good and palatable as cistern water; except near the Gulf, where the water is impregnated with salt; the inhabitants, who reside on the margins of the stagnant lakes and bayous of that part of Louisiana, drink no other kind of water.

I could discover no other cause for the remarkable purity of the stagnant water in the lagoons, swamps, lakes and bayous of lower Louisiana, than the aquatic plant under consideration.

North of the region where the Jussieua Grandiflora flourishes, there is the same kind of alluvial soil, formed by depositions of the identical rivers, which form the soil of Lower

Louisiana, yet stagnant water in hot weather, becomes exceedingly impure, beyond the limits in which the plant under consideration is found. The soil, therefore, cannot occasion the purity of the water of Lower Louisiana, because the same kind of soil, a little further north, has not the same effect. Nor can the purity of the water be owing to the salt or sea water; because the water is equally pure, wherever the aquatic plant grows, whether in salt water or fresh.

I think it may be fairly inferred, therefore, that the aquatic plant known by botanists under the name of Jussieua Grandiflora, consumes or feeds upon those substances, which in other situations corrupt and vitiate stagnant waters in a warm climate.

2. The remarkable health and longevity of the inhabitants, and their exemption from malarious and miasmatic diseases. The fact that the region of country in which the aquatic plant abounds, is exceedingly healthy, can be established beyond cavil or dispute. It nevertheless contains more stagnant water and swamps, than any other inhabited district of the same extent in the United States.

The country immediately north of the line bounding the growth of the floating plant, which is about the thirtieth degree of north latitude, like that south of thirty, is alluvial, contains lakes, swamps and stagnant waters—is covered with nearly the same vegetable productions; but its atmosphere is evidently insalubrious, its stagnant waters impure, its inhabitants sickly, and human life of short duration; while the country of the aquatic plant, immediately south of it, contains a wholesome atmosphere, pure water, healthy, and long-lived inhabitants. It may be supposed that this country is too new and too thinly inhabited to form any correct estimation of the health and longevity of its inhabitants. Such a suppo-

sition is erroneous. Although a considerable part of the region abounding in the aquatic plant is uncultivated and almost uninhabited, yet a very considerable portion of this territory has been settled nearly a century. A large colony from Nova Scotia emigrated to it before the revolutionary war. Some of the settlements south of New Orleans contain more free white inhabitants to the square mile than the oldest and most populous settlement in Pennsylvania.

It may be said that the inhabitants are the descendants of French and Spanish, and consequently no just comparison can be drawn between them and the descendants of the English. It is true that a large portion of the inhabitants are of French extraction. A large settlement of them on the Lafourche, within this region, were born north of the United States, in the cold latitude of Canada. Colonel Sparks, an intelligent sugar planter, who resides on the Bayou Lafourche, in the midst of the colony which emigrated from Nova Scotia more than half a century ago, informed me, in 1831, that a great number of the emigrants were still living. He took me to a number of their houses, and his statements were confirmed by the inhabitants themselves. I saw more than a sufficient number of gray heads and healthy looking children to remove all skepticism in reference to the health and longevity of the inhabitants. Besides the French population, this particular section of country has spread through it a number of Italians, Spanish, Dutch, German, Irish, English and Scotch. It also contains emigrants from almost every State in the Union. The negro population is also considerable, and is remarkably healthy and long-lived. It contains more negroes over one hundred years of age, than five New England States put together, including the total population, white and black. The population of this land of aquatic plants owes its origin to so

many different nations, that it is not uncommon for the Creoles or natives of the country, even when uneducated, to speak with great ease three or four different languages. If it were true, which it is not, that the French people are exempt from miasmatic diseases, such as bilious, remittent and intermittent fevers, it would prove nothing; because the Germans, Spanish, Italians, Scotch, Irish and English, together with the negroes and emigrants from the States north of Louisiana, are all in this land of aquatic plants singularly exempt from such diseases. But neither the French nor any other race of people are thus exempted when they cross the line which terminates the growth of the floating plant. It is therefore a fair inference that this plant, by consuming the impurities of the stagnant waters, prevents the generation of miasmata, and thus acts as a prophylactic against bilious fevers and othermiasmatic diseases.

I am aware that the inhabitants of the country themselves attribute their peculiar healthfulness to the influence of sea-breezes. Out of the region of the floating plant, sea-breezes, however refreshing and beneficial to some constitutions, have not been found to exert any prophylactic power in preventing miasmatic diseases. It is not probable that sea-breezes would do more good for the sea coast of Louisiana than for the sea coast of Georgia, Carolina, Virginia and Maryland.

In the summer of 1831, I travelled extensively through Lower Louisiana, and am fully convinced from what I saw and heard that the particular district of country in which the floating plant abounds is pre-eminently healthy, while those sections of the State, similarly situated but where the aquatic plant was not found, are grievously afflicted with malarious diseases.

I visited, among others, the plantation of M. Rochelle, on a

small bayou, near Berwick's bay. The dwelling houses stood on the high ground, about a quarter of a mile from the bayou. The space between the bayou and the houses was occupied by a swamp through which a canal had been cut to afford access to the high ground or bluff, on which the dwellings stood. M. Rochelle, a few years previously, had the trees, covering the swamp, in front of the houses, cut down, in order to gain a better view of the bayou, and obtain a freer circulation of air. As I passed up the canal or ditch, through the swamp, I perceived, on each side, the decaying timber lying in the water, which was entirely stagnant. In many places the water was not sufficient to cover the ground. On ascending the bluff and looking around, I ascertained, that besides a swamp of a quarter of a mile in width and three miles in length in front of the plantation, there was also an immense swamp in the rear, running back to a *prairie tremblant;* and on the lower side of the plantation was another bayou of stagnant water, and on the upper side a thick forest and cane break. I thought, at the time, that, if the country contained a sickly spot, this was the one.

The Jussieua Grandiflora, however, grew in profusion in all the waters around, whether these waters were in the bayous, or in the swamps; and whether they had communication with the bayous or were isolated stagnant pools, they were found to be pure and transparent—free from any offensive taste or smell.

M. Rochelle had fifty-three negroes living on this plantation and his white family consisted of about a dozen persons. He informed me that himself, and all the family, white and black, except the younger children, were natives of Rockingham county, Virginia—that he had resided on his plantation with this large family, nine years, during which time no

deaths had occurred, either among the whites or blacks, young or old—that there had been not more than three or four cases of sickness during any year—that these cases were slight and required little or no medical treatment. His neighbors confirmed this statement, and gave nearly as good an account of themselves. The negroes with whom I met, all looked healthy, happy and contented.

The next evening I put up at a house containing about twenty white persons and no negroes. The patriarch of the family was a Kentuckian by birth. He married a Spanish woman, who, dying, had left him a widower with several children. He afterwards married a French widow, with two or three children, whose former husband was a German. The children by the last marriage as well as by the former marriages, together with a few aunts and relatives, swelled the whole family to about twenty. No less than four languages, English, Spanish, German and French, were spoken by the same family, living under the same roof.

I got two of the sons of the old gentleman by his first wife to take me in a canoe up Bayou Black. They were with me several days, and, as they spoke four languages, were of great use in enabling me to collect information respecting this country inhabited by the floating plant and polyglot people.

If I have been misinformed in reference to the health of this section of country, then also are great numbers, in and about this city, deceived in this respect equally with myself. Numbers of people in and about Natchez have visited this region of country; some have removed to it; a few have been living in it for years. All, with whom I have conversed, concur in the same opinion of its healthfulness. It is true, they differ in regard to the *causes* of its singular salubrity; some ascribing it to the proximity of the sea and the sea breezes; others to

the large open prairies on its western border, in and near that part of it called Attakapas, without recollecting that the inhabitants of Terrebonne and Lafourche, who reside very remotely from these large prairies and secluded from them by intervening forests, are equally if not more healthy than those living near them.

Having ascertained the facts of the purity of the stagnant waters, and the health of the inhabitants in this section of country, I examined the subject attentively on the principles of that new and interesting science, called, by the French, POLITICAL ARITHMETIC.

The Parishes on and below the thirtieth degree of north latitude are the following: Ascension, Parish of Orleans, (not the city of New Orleans,) St. John the Baptist, St. James, St. Martins on the line of 30°; and the following below 30° and south of New Orleans, viz: St. Mary, La Fayette, St. Charles, St. Bernard, Jefferson, Plaquemine, Assumption, Lafourche, and Terrebonne. These Parisnes in 1830, not including any part of the city and suburbs of New Orleans, contained a total population of 83,943—27,778 white persons and 46,165 negroes. They contained thirty-eight persons over one hundred years of age, whereas the whole of the New England States, with a population 1,954,704, including upwards of 20,000 negroes, only contained thirty-five persons over one hundred years of age. France with thirty-six millions of inhabitants only contained five hundred and thirty-seven persons over one hundred years of age. If France were as favorable to longevity, as the land of the Jussieua Grandiflora, it ought to contain upwards of sixteen thousand individuals over one hundred years of age.

By instituting a comparison on the data afforded by the census of 1830, it will be found that, in all that part of Loui-

siana where the Jussieua Grandiflora grows, for every hundred white males and females between twenty and thirty years of age, there are upwards of one hundred children under five years of age; whereas, in that part beyond the region of the Jussieua Grandiflora, the number of children to every hundred white males and females, between twenty and thirty years of age, is only *eighty-six*, being more than fourteen per cent. less than in that part of Louisiana inhabited by the floating plant.

Again, for every one hundred males and females in those parishes of Louisiana inhabited by the floating plant, there are seventy-nine children between five and ten years of age: but beyond the region of the floating plant, the number is only fifty-seven.

The proportional number in Upper Louisiana of those between ten and fifteen, and fifteen and twenty, is from eight to ten per cent. less than in that part of Louisiana inhabited by the Jussieua Grandiflora.

Taking the number of persons between twenty and thirty years of age in both districts as the standard of comparison, the number of citizens between thirty and forty years of age is eight per cent. greater in the district of the floating plant than in the district north of the region inhabited by it.

The number of white persons between forty and fifty, between fifty and sixty, and between sixty and seventy is from three to four per cent. greater in that part of Louisiana inhabited by the Jussieua than in the district lying north of it. The surest proof of the health of any country is the great number of children and old persons which it contains. Lower Louisiana contains from eight to fourteen per cent more children in proportion to its population than Upper Louisiana, and from three to fourteen per cent. more old persons.

Again, for every one thousand white inhabitants between

fifteen and fifty years of age, in all that part of Louisiana in which the floating plant is found, there are one hundred and thirty-two individuals between fifty and one hundred years of age—whereas, in all that part of Louisiana north of the region of the aquatic plant, the number of persons between fifty and one hundred years of age, is only one hundred and eighteen to the thousand adults.

In the famous city of Boston, the number of persons between fifty and one hundred years of age is only one hundred and twenty to the thousand, twelve per cent. less than in the swamps and bayous of the most southern portion of Louisiana.

The city of New York contains only one hundred and ten to the thousand. But it is proper to observe that, according to the facts disclosed by the science of Political Arithmetic, all high and dry country situations, whether in the north or the south, remote from swamps, marshes and stagnant waters, are more favorable to human life between fifty and ninety years of age than low and damp situations; but after ninety years of age, the low and damp situations are the most friendly to human existence. Although the number of persons between fifty and ninety in Louisiana is less in proportion to the population than the number of persons between fifty and ninety in the northern States or in France, yet the number beyond ninety years of age in Louisiana is much greater than in any of the northern States or in France. Thus, according to the census of 1830, the city of New Orleans, with less than 70,000 inhabitants, contained more persons over one hundred years of age than New York and Philadelphia both together.

It is also a mistaken idea to suppose that dry and elevated situations in the south, remote from stagnant water, are less

healthy, or less favorable to longevity than similar situations in the north. According to the facts afforded by Political Arithmetic, the lives of the people of a number of counties in Mississippi ought to be insured at a cheaper rate than the lives of the people of Kentucky, Ohio, Pennsylvania or New York. In Kentucky, for every one thousand inhabitants between fifteen and fifty years of age, there are one hundred and sixty-eight individuals between fifty and one hundred. In Ohio, one hundred and forty-eight. In Pennsylvania, one hundred and seventy-one. In New York State, one hundred and sixty-seven. In Lowndes county, Mississippi, among the white male inhabitants, for every thousand persons between fifteen and fifty, there are one hundred and ninety-one between fifty and one hundred; in Monroe county, Mississippi, one hundred and fifty-five; in Covington, one hundred and sixty-nine; in Lawrence, one hundred and seventy-six; in Pike, one hundred and sixty-eight; in Perry, one hundred and seventy-one; in Copiah, one hundred and sixty-five; in Amitie, one hundred and seventy-five; in Marion, two hundred; in Green, two hundred and twenty-five; in Jackson county, two hundred and thirty-two, and in Hancock, two hundred and forty-one.

The three last named counties contain more old people to the thousand than the State of Maine which contains two hundred and twenty one.

Hancock county exceeds Massachusetts by three in the thousand.

Although the probabilities of human life between fifty and ninety years of age are considerably less in the low swampy district of Louisiana, inhabited by the Jussieua Grandiflora, than in the dry and elevated counties of Mississippi, and less than in the high, dry and mountainous regions of Kentucky,

Pennsylvania and Vermont, yet it is fourteen in the thousand more favorable to longevity than similar low and marshy districts north of the region of the aquatic plant. It is even eighteen in the thousand more favorable to longevity than the low swampy State of Illinois.

But the hygienic properties of the Jussieua Grandiflora are less evident in promoting longevity, than in exempting man from that fatal tribe of malarious or miasmatic diseases which cut off so many of the southern people in the prime of life. The number of persons who die in the northern States, in the prime of life, by consumption, typhus fever and inflammatory complaints, is about equal, or even exceeds, the number who die in the south of malarious diseases. But the region of country, in which the Jussieua Grandiflora flourishes, is from its mild climate comparatively exempt from consumption, typhus and inflammatory affections; and by reason of the anti-malarious properties of the plant, it is singularly exempted from all that tribe of diseases which are produced by marsh miasmata or by the unwholesome air of swamps, called malaria. The plant, it would seem, converts into its own nutriment those very impurities of stagnant water, which in other situations load the atmosphere, at certain seasons of the year, with noxious effluvia.

I saw the identical plant, the Jussieua Grandiflora, which is so abundant in Lower Louisiana, cultivated as a curiosity in the botanical garden belonging to the University of Oxford. It had a large basin of water, several yards in diameter, appropriated exclusively to it. The water of the basin in which it floated was pure and sweet, while the water of a number of other basins, appropriated to other aquatic plants, was far from being as much so. The English botanist, who showed it to me, could not account satisfactorily for the circumstance.

He assured me that all the basins were filled at the same time. But the true explanation is, that the most of the other plants draw more or less nourishment from the earth and the atmosphere, and do not, as the Jussieua Grandiflora, derive the whole of their nourishment from the water. All aquatic plants, no doubt, serve to purify the water in which they grow in proportion to the amount of nourishment they draw from it.

I have already shown that the number of persons between thirty and forty years of age, in that part of Louisiana where the aquatic plant grows, is eight per cent. greater than the proportionate number of persons between thirty and forty in that section of Louisiana which lies north of the district inhabited by the plant—although the northern district includes a large portion of high and healthy piny woods.

Kentucky, in 1830, contained 87,852 white persons between twenty and thirty years of age, and only 49,750 between thirty and forty, and 31,442 between forty and fifty. The proportions, therefore, are as follows: For every hundred individuals in Kentucky, between twenty and thirty years of age, there are only fifty-six between thirty and forty. In the district of Louisiana inhabited by the aquatic plant, the proportional number is sixty-four: eight per cent. more persons die, therefore, in Kentucky, in the prime of life, than in the swamps of Lower Louisiana; but between forty and fifty, Kentucky has the advantage of Louisiana one per cent. The probabilities therefore of human life between thirty and fifty years of age, are seven per cent. better in the swamps of Lower Louisiana, than in the healthy State of Kentucky.

The State of Pennsylvania, in 1830, contained 237,257 white persons, between twenty and thirty years of age. If Pennsylvania were as favorable to human life, between thirty

and forty years of age, as that part of Louisiana, in which the anti-malarious plant is indigenous, it ought to have contained 153,242 persons between thirty and forty. But the census shows that it contained only 144,776. Therefore 8466 persons, under forty, would have lived over forty, if they had resided in Lower Louisiana, instead of the mountains of Pennsylvania. But after forty, Pennsylvania has the advantage; but it is so small, as in twenty years, including the period from thirty to fifty, that the probabilities of human life are only one two hundred and thirty-seventh part greater in Pennsylvania than in Louisiana. But after fifty, the probabilities of the duration of life are considerably more in Pennsylvania until ninety, when it again turns decidedly in favor of Louisiana.

Ohio, in 1830, contained 156,864 inhabitants between twenty and thirty, and only 93,240 between thirty and forty; whereas, if Ohio were as favorable to human life, in its prime, as Lower Louisiana, it should have contained 101,424; making a difference in favor of the region of country inhabited by the Jussieua Grandiflora, of 8,184 persons. Even in twenty years, from thirty to fifty, the probability of human life would, in the same population, be 3379 better in Louisiana, than in Ohio. But after fifty, the probabilities would run in favor of Ohio until ninety, when it would turn in favor of Louisiana.

In regard to the health of children in Lower Louisiana, the following facts derived from the results afforded by political arithmetic, should be conclusive: For every thousand white females between fifteen and fifty in Lower Louisiana, there are 2357 children under fifteen years of age. If the country was not favorable to infantile existence, the number would not be so great, by one half.

In Pennsylvania, the number of children under fifteen years, to every thousand females, between fifteen and fifty, is only

2961. In Kentucky, 2370; in Ohio, 2275; in E. Tennessee, 1354; in the Northern District of New York, 1967; in Virginia, 1972; in Mississippi, 2540. But in the paludal, or swampy distrtcts of Mississippi, the number of children is about three hundred to the thousand less than in the district of Louisiana inhabited by the Jussieua Grandiflora.

In the United States, taken as a whole, the number of persons between twenty and thirty exceeds, in a small degree, the number of children under five years of age, (only sixteen in nearly two millions.) In Lower Louisiana, the children under five years, exceed the adults between twenty and thirty, forty-eight; in Upper Louisiana, the adults between twenty and thirty, exceed the children under five years, no less than 1208, giving Lower Louisiana about eight children, where Louisiana has seven. In the United States, the adults between thirty and fifty years of age, are nearly equal to the adults between twenty and thirty. The same thing occurs in that portion of Louisiana where the aquatic plant is found. There the adults between thirty and fifty are only forty-nine less than the adults between twenty and thirty. Whereas in Upper Louisiana, the adults between thirty and fifty fall short of the adults between twenty and thirty, no less than 1097.—Thus it appears, from a variety of facts, that a low, alluvial region, subject to annual inundation, and abounding in stagnant pools, lakes, lagoons and impassable swamps, in the most southern portion of the United States, is rendered not only habitable, but healthy, by an aquatic plant, that consumes or feeds upon the impurities of the water in which it grows, and thereby prevents the generation of miasmata, or those noxious vapors so unfriendly to human existence. It would seem, therefore, that the experiment of rendering other low and inundated districts of country healthy, by disseminating the Jus-

sieua Grandiflora upon their stagnant waters, would be well worthy a trial. It would certainly be a great achievement of experimental philosophy, if she could extend the empire of her power into those low, swampy and insalubrious districts of the South, and convert them into healthy abodes; even to make mill-ponds healthy would be no small triumph.

True philosophy is not, as is too often supposed, an inactive, inanimate, inefficient thing, incapable of doing good, or of accomplishing useful purposes; but it is an animated, restless, self-moving power, perpetually in action, constantly striving to make inroads upon the mysteries of nature, in order to drag something to light which may subserve the purposes of utility to man. That proud Isle, on whose possessions the sun never goes down, and whose name is a terror to every land but our own, was formerly nothing but an unhealthy, insignificant spot of earth, noted for nothing but the crab-apple, and almost inaccessible by reason of stormy seas. Philosophy, however, by uniting itself, as an active and directive power, with the various artists, agriculturists and manufacturers, has made England what it now is. But there, as in all other countries, except our own, the happiness and comfort of the many have been sacrificed to the pride and luxury of the few. This, however, is not the fault of philosophy, but the fault of the people in not applying or calling in the aid of the experimental, or Baconian philosophy to direct the affairs of State.

Our happy form of government rests on the firm basis of the Baconian or experimental philosophy. Our individual distinctions in society are all such as nature makes. The broad, artificial distinctions which divide the people of Europe, are unknown amongst us. Our government is founded upon *natural*, not *artificial* distinctions in society. Our chief executive officer can never, in the nature of our philosophy, be a

child in its cradle or a girl in her teens. The same experimental philosophy, which we have found to succeed so admirably in our government, will also succeed equally well in our fields; and cause two blades of grass to grow where only one grew before. It is not too much to hope from it, that it may yet be made to convert sickly districts into healthy ones. There are many ways of accomplishing this object, in a greater or less degree, by embankments, draining, and a proper system of cultivation. I only propose the dissemination of the Jussieua Grandiflora, as a means of preserving health in those districts not susceptible of being drained or cultivated. Mississippi already owes half her wealth and influence to the successful application of the experimental philosophy to a single plant. It has been but a few years ago, when the cultivators of the cotton plant considered one hundred pounds a good day's work, for any one laborer, and moreover thought themselves fortunate, if half the bowls or pods on the plant, did not annually perish with the disease called the rot.

At length the experimental philosophy, fortunately came to the aid of the planter. It procured some seed from another variety, or, as I believe, a different species of the cotton plant, as found in the table lands of Mexico. The pods of the Mexican species, were not affected by the rot, as the capsules were thicker, and less tender than the species at that time cultivated in Mississippi. But the attachment to the dissepiment and pillar of the capsule was so weak, that as soon as the capsules expanded, the cotton wool dropped out of the pods, and fell to the ground. The experiment having in a measure failed, a second was instituted, by planting the seed of both species together in the same drill. A new species of the cotton plant was thereby produced, which did not rot, did not drop out of the bowls or pods, yet the bowls expanded freely, making it

more than twice as easy to pick or gather, as the kind formerly cultivated. But in a very few years it was found that the new made species of cotton, called Mexican, was fast degenerating into the old black seed kind. A third experiment was instituted, which consisted in separating the white, or Mexican seed from the black seed, and planting the white.—This was found to re-instate the new species which possessed the advantages of both the parent species without their disadvantages.

Thus, in a few years the experimental or Baconian philosophy, has enabled the planter to make twice the quantity of cotton with the same labor, and Mississippi is indebted to it for half her wealth and power.

Our government, as I said, is founded upon the same philosophy—our agriculture is daily improving under its influence —by its aid our manufacturing establishments are already beginning to rival those of Europe—it has increased the velocity, beauty and strength of our shipping beyond all other nations in the world. It has diffused science into mechanism, shortened the road to mechanical knowledge, and elevated the American mechanic to the high station of the intelligent, the good, and the useful. It has discovered better systems of education, improved those that formerly existed, and established new ones. Sunday Schools, Bible and Tract Societies and Missionary establishments are nothing more than so many philosophical experiments, having for their object the diffusion of Christianity—or in other words, experimental philosophy trying to open the adamantine doors of ignorance and superstition to let in light. The ecclesiastical page of future times will tell the result. If this experimental philosophy, which has already done so much for mankind, and which is daily doing more, be invoked, it will not be expecting too much

from it to hope, that it will ultimately point out the means, by which unhealthy districts of country may be rendered salubrious. Whether the dissemination of the Jussieua Grandiflora be one of them, time and experience can alone determine.

ART. IV.—*A Case of Purpura Hemorrhagica successfully treated.* By WM. W. SEARCY, M. D., of Nashville, Tennessee. Reported to the Medical Society, of Tennessee, at its 11th annual meeting.

ON the 18th of August last, I was requested to visit a young girl, aged 12 years, who, I was informed, had been laboring under an attack of fever of nine days duration, but had been convalescing. The situation of the girl when I first saw her was as follows:—she was very pale, and could not be raised for fainting; her surface was unnaturally cool; great restlessness; some thirst and headache; tongue pale and flabby; pulse barely perceptible and extremely frequent; *much tenderness* of epigastrium to pressure; her bowels constipated. There was a constant oozing of blood from the nares and throat, which had existed for two days and nights uninterruptedly, which caused extreme exhaustion. There was discovered about the face a few red and blue blotches, and a further examination revealed a numerous eruption of a similar kind on the body, limbs, insides of the lips and cheeks. They varied from the size of a pin head to a four-penny piece.

The girl has always been rather delicate, of a nervous, sanguine temperament. She has never had a similar eruption; bleeds frequently from the nose when in health, but never

before to an alarming or exhausting extent. Her flesh when wounded is not disposed to bleed more profusely than similar wounds in other persons; none of her relations have been known to have a similar eruption or to be subject to profuse hemorrhages. The scrofulous diathesis is not known in the family.

Four grains of acetate of lead were ordered to be administered every half hour until the hemorrhage should cease; also a strong solution of the same (1 drachm to a pint of water,) to be repeatedly injected up the nares. A blister was applied to the nape of the neck and one to the calf of each leg. Diet, water gruel, chicken broth, or rice water; drink, lemonade.

The next morning, 19th, I was informed that the hemorrhage had ceased after the seventh dose of lead, and had not again returned; the blisters had drawn well. Her extremities and surface at present are much warmer; pulse not so feeble, but still very frequent; the patient is very restless, has slept but little for two or three nights; complains very much of her blisters, has but little thirst and no appetite; *great tenderness* of the epigastrium to pressure; and bowels constipated. The last passage from her bowels was dark and liquid. Her tongue is pale and flabby; there is a pretty numerous new crop of petechiæ; those of yesterday which were small and red, have enlarged and are of a bluish cast. A mercurial purge of 12 grains of calomel was ordered, and every two hours 6 drops of elixir vitriol and 1 grain of sulph. quinine. Diet and drink continued.

20th. Patient's condition not materially altered since yesterday; calomel has operated but once, the evacuation copious, dark, and liquid. She had slight fever yesterday evening. There is still much tenderness of epigastrium; pulse and

tongue vary but little. Ordered castor oil, and a continuation of vitriol and quinine, and the same diet and drink.

21st. After taking oil yesterday, patient's bowels were freely purged; discharges more consistent and yellow; rested very well and slept soundly all night; her appearance and symptoms every way much more favorable; she feels much stronger and desires to eat; very few fresh petechiæ, and old ones fading considerably; tenderness of epigastrium much less. Ordered a continuance of quinine and vitriol, and diet a little more nourishing.

22d. This morning patient says she does not feel so well as on yesterday; indulged rather freely in eating, and had some fever in the evening; rested badly last night; eruption fading away and no new specks discovered; pulse frequent but feeble; headache; bowels have not been moved since yesterday morning; epigastrium *tender* again to pressure; there has been no return of the hemorrhage. Ordered castor oil; continue quinine and vitriol, and restrict her diet exclusively to water gruel, chicken broth, or rice water, and use acid drinks. Visited her this evening, found her with some fever and headache. Oil which she took this morning had operated but once; prescribed an additional dose of oil; discontinue quinine and vitriol and use citrated kali during pyrexia.

23d. Patient expresses herself much better this morning; had three copious discharges early last evening, consistent and yellow; tenderness of epigastrium very much diminished; fever left her early in the evening, has rested well all night; free from headache; feels much stronger and desires to eat. Temperature of the surface and extremities more natural; tongue looks well; pulse fuller, soft and not so frequent. The eruption is now barely visible. Ordered castor oil and resume quinine and vitriol.

24th. Patient convalescing—omit the tonic and take oil enough to keep the bowels moderately soluble.

25th and 26th. Patient still convalescing and continued from this out to mend rapidly. Up to this date, 4th May, 1840, has had no return of the disease and her health is excellent.

Nashville, May, 4, 1840.

ART. V.—*A Case of Concussion of the Brain.* By J. L. BURTT, M. D., of Cincinnati, Ohio.

MAY 27th, 1840, the mother being absent, the child which forms the subject of the present paper, aged three years, was left in charge of some of the rest of the family, and was suffered to climb over the sill of a window in the second story of a large dwelling house. From thence, a height of perhaps 16 feet, it fell upon the brick pavement beneath. Falling upon the vertex of the head, when taken up, and for an hour afterwards, the cranial bones were so depressed as to present an almost level surface. I might safely say, that its head was as flat as a table.

The *os frontis* projected forward at least two inches over the eye brows, in its natural position. The child was examined by Drs. Mussey and Fore. It presented all the symptoms of violent concussion of the brain for about an hour.

Its head was shaved, but on examination no symptom of fracture was found as had been expected. After this period, a spasmodic action of the facial muscles ensued, and shortly after it vomited several times, which seemed to relieve it and in a great degree to overcome the remaining stupor.

Cold applications to the head, and enemata, which were speedily followed by copious evacuations, formed the treatment at this period. From the time that its bowels acted it seemed perfectly sensible, knowing its mother and asking for water. In the mean time, the cranium had made considerable advances towards its proper elevation. I sat up with it during the night—it rested well; the reaction was not high, so that bleeding was not necessary; and the cranial bones rapidly assumed their natural position.

From this time until the 30th, the convalescence was rapid, the only treatment being cold applications to the head, and the administration of gentle cathartics.

31st. Patient able to walk, with a little assistance.

June 2d. To all appearance perfectly well.

Cincinnati, June, 1840.

REVIEWS.

ART. VI.—*Researches Anatomical and Physiological.* By JOHN DAVY, M. D. F. R. S. Assistant Inspector of Army Hospitals. In two volumes. London; Smith, Elder & Co., 65 Cornhill, 1839. pp. 935 8vo.

FROM the distinguished connexions, as well as the high standing of the author of this work (being as he is a brother of the late Sir Humphrey Davy,) and from the great length of time he has been engaged in the collection of materials for it, and in its composition, (some of it having been written nearly thirty years ago)—from these and other considerations, especially the wide and varied range of observation and research which it embraces, it ought to be hailed as a production of ample promise. And such we believe is the case in relation to it. Nor do we say that it will altogether fail to satisfy public expectation. Yet, that we ourselves are not a little disappointed in our hopes and anticipations respecting it, is not to be either denied or disguised. That, as a whole, it is much more voluminous and labored, than well conceived, judicious, and useful, we feel ourselves authorized, and deem it our duty as reviewers to assert. Yet are many sections of it characterised by a full sufficiency of interest and merit, to invite and reward an attentive perusal of them. The *whole host* of experiments it contains, though perhaps unnecessarily,

not to say *exceptionably* numerous, we are not prepared to pronounce either inaccurate or unprofitable. Far otherwise. But the usefulness of *many* of them whether in a scientific or a practical point of view, (were it correct in us to make a distinction between *those qualities*,) we are unable to discover.

The work, as it now appears, does not possess the freshness of originality, the greater portion of it having been previously published at the periods when it was written, either as articles in the Transactions of the Royal Society, or in some of the minor Journals and Periodicals of the time. And, for making up those articles into volumes, the author assigns the following reasons:

"I have recourse to re-publication, partly for the purpose of bringing together papers which are scattered in the transactions of Societies, and in Journals not easy of access; and partly with a view to alterations, corrections, and additions, which either after-reading, or further research has enabled me to make; and lastly, with the hope that the collection thus formed may prove of use, both to the medical student, and the medical inquirer."

The work consists of nearly fifty different papers, each of them treating of a subject more or less distinct from all the others. It need hardly be added, therefore, that to give the slightest notice of an entire collection, so extensive and multifarious, in a single review of the customary length, is altogether impossible. Hence we shall select, as the theme of our analysis and remarks, a single article entitled,

"*An account of some Experiments and Observations on the Torpedo.*"

And even of this our consideration must be limited; and to render it as free as possible from mistake and misrepresen-

tation, we shall allow our author, in most instances, to speak for himself. In the following clause he states succinctly the defective condition of the knowledge possessed by naturalists and physiologists, respecting the phenomena exhibited by the torpedo, previously to the commencement of his own investigation of the subject, and makes known the points designed to be elucidated, by the experiments he instituted, in the course of his researches.

"I may premise that when I entered on the enquiry, it had not been ascertained, that the electricity of the torpedo, considering its peculiar influence to be electrical, had either the power of acting chemico-electrically, in separating the elements of compound bodies; or magnetically, either in affecting the needle in the multiplier, or in imparting magnetism to iron; or lastly of generating or producing heat; points to which my experiments were particularly directed, and with positive and successful results."

Before proceeding farther in our examination, we shall refer to a circumstance which, in our estimation, increases not a little the interest attached to the paper we are considering. It was written by its author at the request of his dying brother, Sir Humphrey Davy, president at the time of the Royal Society. That request was conveyed in the following letter, which beautifully and affectingly discloses the expiring philosopher's "ruling passion strong in death."

Rome, Feb. 25th, 1829.

"My dear John,

"If I had not had this attack, it was my intention to have gone to Fumicina, or Civita Vecchia, to make some experiments on the torpedo. I hope you will take up this subject, which, both as a comparative anatomist and chemist, you are very capable to elucidate. You will see my paper on the torpedo, in the manuscript book which I have left in Mr. To-

bin's hands.* It was my wish to have exposed an unmagnetised needle to the continued shocks of a torpedo in a metallic spiral, making the metallic communication perfect with both electrical organs. There is in my little box, an apparatus which I hope you will use. Large living torpedos may be procured at Fumicina, or Civita Vecchia. The shock from a very small jar will make a needle magnetic, provided it is entirely passed through the metallic conductors; but I did not find this effect when there was any interruption by water. There are many things worth attending to in the two kinds of torpedinal fishes found here—the tremula and occhiatella. Pray do not neglect this subject, which I leave to you as another legacy. God bless you, my dear brother, your affectionate Friend,

"H. Davy."

The commencement of the writer's investigation of this curious and well selected subject, we shall communicate to our readers in his own words.

"*Experiments on the Electricity of the Torpedo.*

"From the preceding letter, it appears how desirous my brother was of trying the effect of the shock of the torpedo on a needle placed in a spiral wire. The result, he was of opinion, would be conclusive as to the nature of its electricity,—that is, whether it should be considered distinct, and of a peculiar kind, or merely a variety of common electricity, or at least analogous to kinds already known.

"Anxious to make this trial, I had an apparatus in readiness, which, with common electricity, I had found to answer extremely well. It consisted of a fine copper spiral wire, (the spring of a bracer) about one inch and a half long, and one-tenth of an inch in diameter, containing about one hundred and eighty convolutions, and weighing about four grains and a half. This was inserted into a glass tube, just large enough to receive it, and secured by corks.† The wire passed through the cork at each end, and was connected with

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* This, his last paper and communication to the Royal Society, was published in the Philosophical Transactions, for 1829; it was written in the preceding October; its results were entirely negative.

† The apparatus referred to by my brother, in his letter, did not answer so well: the spiral was of silver wire wound round a glass tube.

strong wires with glass handles for the purpose of contact. The wire intended to be applied to the under surface of the fish was one-twenty-fifth of an inch in diameter; that intended for the upper surface was stiffer, being one-fourteenth of an inch in diameter, and its greater strength was useful, as it was necessary to employ it occasionally with some force to rouse the fish when averse to give a shock. The first trial I had an opportunity of making with this apparatus, was successful. It was on the 3rd of Sept. 1831, at eleven o'clock at night.* The fish used was a small one, about six inches long; it had been just caught in a hand-net, and immediately put into salt water, and was very active. A needle perfectly free from magnetism, was introduced into the spiral, and there confined by the corks, and the spiral was carefully connected with the insulated wires for contact. The fish for the experiment was placed in a glass basin, and was barely covered with water. One wire was applied to the under surface of the electrical organ, and the other to its upper surface, and contacts were made at intervals during about five minutes, when the fish seemed much exhausted by its exertions. On taking the needle out, and bringing it near some fine iron filings, it was found to be magnetic, and powerfully attracted them. This experiment I have repeated many times with fishes of different sizes, some larger and smaller, and with the same result whenever the fish has been active, and the contacts similarly made.

"The next trial instituted on the electricity of the torpedo was on the multiplier; it was one which belonged to my brother, the needle was poised on a pivot, and was not very sensible. The precaution was taken to insulate the instrument well, by smearing with sealing wax the feet of the stand supporting the coil. The same wires for contact were used in this as in the former experiments, and the junctions were carefully made. Applying one wire to the under surface, and the other to the upper surface, using the fish first mentioned, and after an interval of only two hours, I succeeded in obtaining decisive results; the first shock had a powerful effect, the needle made half a revolution: and other trials were in

* It may appear singular that this experiment was not made before. The explanation is easily made.—On my return from Rome to Malta, in June, 1829, I was assured that the torpedo is not known in the latter place. It was not until the summer of 1831 that I found out that I had been misinformed, and that, with a little trouble, the fish may be procured alive at all seasons of the year.

accordance. The needle, by active fishes, was generally thrown into violent motion, occasionally describing nearly a circle, and even by the feeblest it was distinctly affected. I have met with no instance of a fish which had the power of magnetising a needle in the spiral wire, failing to move the needle in the multiplier; but I have met with more than one example of a fish, whose electricity was equal to the latter effect, and not to the former."

Again says our author:

"I thought it possible, that by insulating the torpedo on a plate of dry glass, and wiping its circumference dry, and smearing it with oil, that the galvanometer might be affected. But in this, too, I have been disappointed; not even in flame, when the interruption of the circle has been only just visible, has any effect on the instrument been produced.*

"Mr. Farady, in the Third Series of his Experimental Researches on Electricity, states that he has little or no doubt, were Harris's electrometer applied to the torpedo, the evolution of heat would be observed.† I have made very many experiments on this subject, completely establishing Mr. Farady's anticipation. The instrument employed was similar to that described by Mr. Harris in the Philosophical Transactions for 1827, differing merely in the wire passed through the small globe being exceedingly fine, and of platina, formed after Dr. Wollaston's method;‡ in having a small stop-cock for regulating the height of the spirit in the stem; and in using as small a quantity of spirit as possible. The small

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* Since the above remarks were first made, M. Matteucci has obtained sparks from the torpedo, and Mr. Farady from the Gymnotus,—not indeed directly, as Mr. Walsh was supposed to have done, but by means of a "magneto-electric coil," the object of which, it has been hypothetically said, is to prevent the electrical principles from neutralizing themselves directly through the conducting matter adjoining; and to force them to re-unite at a distance, by traversing the thin stratum of air in which the spark was taken. Bibliothèque Universelle de Genève, June, 1836, p. 387. The preceding part of this note was written in December;—I have since learned (now January 26, 1839,) that a spark has been taken direct from the Gymnotus, in the Adelaide Gallery, and that it was accidentally observed in making an experiment, instituted with a different object in view. My authority for this singular occurrence, and one so difficult of explanation, is the very intelligent superintendent, Mr. Bradley.

† Philosophical Transactions, 1813, p. 46.

‡ Philosophical Transactions, 1813, p. 114.

globe or bulb of the thermometer was defended from the variable temperature of the surrounding air, by being included in a wooden box. The delicacy of this instrument was so great, that the spirit in the stem was not only moved by a single spark of the electrical machine, but even very distinctly by the electricity of a single voltaic combination, composed of a copper and zinc wire, the former 1-25th of an inch in diameter, the latter 1-50th, excited by dilute sulphuric acid.

"This instrument was strongly affected by active fish, and even distinctly by weak ones;—indeed, occasionally, when it formed part of a circle in connexion with a galvanometer, I have seen it affected alone, the galvanometer affording no indication of the passage of the electricity. Using two air-thermometers of the same construction, each connected with the wires for contact at one end, and with the galvanometer at the other, the heating effect of the electricity of the torpedo has been apparently diminished, and even more distinctly diminished on adding to the circle another link of very fine platina wire. And at the same time its influence on the galvanometer has been diminished, and its power of imparting permanent magnetism to a needle placed in a spiral, both forming part of the circle. When heat has been applied to the entire link of platina by means of a spirit lamp, so as to render it red hot, the diminution of effect disappeared; and equally so, as well as I could judge from many experiments, whether acting on the thermometer, the galvanometer, or the needle in the spiral."

But we can no farther report Dr. Davy's experiments. Our space does not permit us to go into detail. To become acquainted with those experiments (and they are well worth the trouble of forming an acquaintance with them,) the reader must resort to the article before us, and be content for the present with a narrative of results. Our author continues:

"The tests or indications of electricity of the torpedo, at present known, are six in number; namely, the physiological effect, as the sensation it imparts is sometimes called; the chemical effects, as the precipitation of iodine, the decomposition of water, &c.; its effects on the thermometer, on the galvanometer, and on steel in the spiral. These different tests, in point of delicacy, I am inclined to believe, are in

the order in which they are enumerated. That the two first should be placed highest, and that sensation should have the precedence, the experiments which I have made appear to prove independently of all analogy."

After giving a long and circumstantial anatomical description of the "*electrical organs*" of the torpedo, into which the nervous tissue enters, as the leading element, and subjoining a detailed account of the experiments performed by him, the Doctor communicates, in the form of results and inferences, what he frankly denominates "*theoretical remarks.*" Some of these are as follows, and deserve, in our opinion, the serious consideration of all philosophical naturalists and physiologists.

"The experiments which I have detailed on the electricity of the torpedo, confirm those of Mr. Walsh, made in 1772, shewing its resemblance to common electricity. They moreover show, that like common electricity, and voltaic electricity, it has the power of giving magnetic polarity to iron, and of producing chemical changes. In these its general effects, it does not seem to be essentially peculiar, but as much allied to voltaic electricity, as voltaic electricity is to atmospheric, or atmospheric electricity is to that produced by contact or friction. When we examine more minutely its phenomena or effects, in relation to these different kinds or varieties of electricity, certain points of difference occur.

"Compared with voltaic electricity, its effect on the multiplier is feeble; its power of decomposing water and metallic solutions is inconsiderable; but its power of giving a shock is great, and so also is its power of magnetising iron.

"Compared with common electricity, it has a power of affecting the multiplier, which under ordinary circumstances, common electricity does not exhibit; its chemical effects are more distinct; its power of magnetising iron,* and giving a

* There is this difference when two spirals are used, one connected with the inside of a Leyden jar, and the other with the outside; a needle in each, similarly placed, acquires opposite polarities, the north pole in one being where the south pole is in the other; whilst in the instance of the torpedo they accord, so that a line of needles, passing from one side of the electrical organ to the other, would exhibit a succession of similar poles

shock appear very similar; its power of passing through air is infinitely less; as is also its power of producing heat.

"There are other points of difference; I allude chiefly to the results obtained in the experiments already described, in which the metalic communication was interrupted by a strong solution of salt. In this instance the full power of the fish appeared to pass; water was decomposed, a shock was received, needles were magnetised, and the multiplier was affected. When the same experiment was made on the electrcity excited by the small voltaic combination of a single plate of copper and zinc, each less than an inch in length, and half an inch in breadth, immersed in an acid, neither water was decomposed, nor was the multiplier affected. When it was made on the electricity of the electrical machine, by means of a Leyden jar, all the effects were witnessed, excepting the motion of the multiplier, and the order of succession of poles in the needles magnetised in the spirals. How are these differences to be explained? Do they admit of explanation similar to that advanced by Mr. Cavendish, in his theory of the torpedo, and which has recently been ably advocated by Mr. Farady? or are they more in accordance with the idea which my brother was disposed to adopt, that the electricity of the torpedo and of the other electrical fishes is peculiar,—a power *sui generis?* or, lastly, may we suppose, according to the analogy of the solar ray, that it is not a single power, but a combination of powers?

"The first opinion, which is commonly received, is supported by the majority of facts detailed in the preceding pages. The circumstance principally hostile to it, at least in appearance, is the interruption of the torpedinal electricity by the smallest quantity of air, and its want of the power of attraction and repulsion in the air.

"These peculiarities are seemingly in favour of the second opinion, that the electricity of the torpedo is specific and peculiar. But till the opposite surfaces of the electrical organs can be perfectly insulated, so that no easier mode of communication is afforded than through air, they can hardly be considered of much weight.*

"The third opinion may be indulged in as an hypothesis; as a guide to research it may not be useless. It applies, how-

* In the experiments in which I attempted to insulate the surfaces, by means of oil, the probability is, that I failed, and that a communication continued, if not by the outer surface of the skin, at least by its inner; indeed, the attempts to insulate these organs, in the manner desired, seems to be almost hopeless.

ever, almost as much to other varieties of electricity as to that of the torpedo; all of which, it is possible, may be compounded, or owe their various effects to the union of several powers, or ethereal fluids, and their peculiarities compared one with another, to the predominance in various degrees of these fluids. What is known of the solar ray is not unfavourable to such an opinion; and the history of physical science, in relation to elementary ponderable matter, may give rather encouragement to the notion.

"As regards the mode of production, or the cause of the electricity of the torpedo, it is unavoidably enveloped in great mystery. Like animal heat, and the light emitted by certain animals, and I may add, the secretions of animals generally, it appears to be the result of living action; and connected with a peculiar and unusually complicated organization. All the attempts have been vain, which I have made, directed to obtain electrical excitement in the fish, after it had been deprived of life.

"The observations which I have detailed relating to its anatomical structure, show a complicated adaptation of parts—nerves of unusual magnitude ramifying between apparently insensible columns, saturated with a bad conducting fluid; muscles surrounding these columns, and fitted to compress them; and a system of mucous glands and tubes adjoining, well adapted to be the medium of electrical communication in the surfaces to which they belong.

"When we consider this structure, it is an easy matter to trace rude analogies between it and the pile of Volta, or between its columns, and a battery of Leyden jars, such a battery as was formed by Mr. Cavendish, for imitating the electricity of the torpedo, composed of a large number of jars of very thin glass feebly charged. But these analogies seem to help very little, if at all, towards the solution of the great difficulty: the question remains unanswered, what is the cause or source of the electricity? Here analogy fails entirely; none of the ordinary modes of excitement appear to be at all concerned—neither friction, nor chemical action, or change of temperature, or change of form. Let us consider for a moment a small torpedo in an active state. The smallest which I have employed in my experiments weighed only 410 grains, and contained only 48 grains of solid matter; its electrical organs weighed only 150 grains, and contained only 14 grains of solid matter,—for to this they were reduced by thorough drying. Yet this small mass of matter gave sharp shocks, converted needles into magnets, affected distinctly the multiplier, and acted as a chemical agent, effecting the decomposition of water, &c. *A priori*, how inconceivable that these

effects could be so produced! This fish was about ten days in my possession, during the whole of which time it ate nothing, and its bulk was hardly sensibly altered; and every day it exercised its electrical powers, and to the last they appeared almost as energetic as when it was fresh from the sea. This adds, if possible, to the difficulty of explanation. That this mysterious function is intimately connected with the nerves, and in a manner more striking than all ordinary secretions, is manifest. Beyond this conclusion, all is darkness. We have not, as we have in the doctrine of animal heat, advanced another step—we have not been able to connect it with changes in the electrical organs, as analogous to known sources of electricity, as the changes which take place in the lungs in respiration are to the known sources of heat or combustion. The attainment of this step is a great desideratum, and beyond it, probably, we shall never be able to proceed.

"Without reverting to the conjectures, which in passing I have offered on the subserviency of the electricity of the torpedo in an auxiliary manner to digestion, respiration, and the secretion of mucus, I may remark that its chief use appears to be for purposes of defence—to guard it from its enemies, rather than to enable it, according to vulgar opinion, to destroy its prey, and provide itself with food. Small smelts, which were kept in the same vessel with torpedos, appeared to have no dread of them, and I believe they fed on their mucus. And, in an experiment in which, in a confined space, an active torpedo was excited to give shocks, a smelt which was with it was evidently alarmed, and once or twice exposed to the shock, leapt nearly out of the vessel; but was not injured by the electricity. In confirmation, I may add that the electric power of the young fish, which most requires it for its protection, is, as already observed, proportionally very much greater than that of the old, and can be excited without exhaustion and loss of life much more frequently. After a very few shocks, most of the old fish which I have had have become languid, and have died in a few hours; whilst young ones from three to six inches long have remained active during ten or fifteen days, and have never failed to shew the effects I have described."

Such are the amount and character of the analysis which we find it expedient give, at present, of our author's paper respecting the torpedo. That the subject is not only curious in itself, but highly interesting to all the votaries of physical science, especially to that portion of them who are earnest

inquirers into the laws and habitudes of living matter, will not be denied. And should any one ask, whether it is also practically useful? we would promptly and positively reply in the affirmative—provided it be correctly and thoroughly understood. With whatever point in nature it may be connected, every truth, when fully known, is more or less practically useful, because it increases in some way the power and efficiency of those who possess it—conditioned that it be suitably and judiciously applied. This is as true, as that every dollar a man possesses makes a part of his wealth, and fits him, if properly employed, to act to better and more useful effect. This is but another version of the oft-quoted Baconian maxim that "knowledge is power."

The article before us is a paper on comparative anatomy and physiology. And the usefulness and importance of that study are now universally felt and acknowledged, by every physician who is worthy of his profession. So true is this, that, without some acquaintance with the anatomy and physiology of the inferior animals, the knowledge of human anatomy and physiology is necessarily defective. Were this position doubtful, it might be illustrated and confirmed by instances innumerable.

In the organization of living matter, the nervous tissue, including the brain and spinal cord, are at once the leading and commanding element. Were other considerations therefore wanting, the mere fact, that our author's paper tends to shed light on some of the functions and uses of that tissue, testifies to its importance. In examining that paper then, we have been contributing to the diffusion of *practical* knowledge. In future numbers of the Journal, we shall probably give analyses of some of the Doctor's other papers, especially of one on the "blood," and of another on "animal heat"—both of which we think productions of interest and merit. C. C.

Selections from American and Foreign Journals.

On Creosote as a remedy for Deafness. By O. H. Partridge, M. D.—From numerous observations that I have made in hospital and private practice, I believe that four cases out of five of deafness are caused either from local debility, producing what is generally called "nervous deafness," or from a want of action in the ceruminous glands, or in consequence of the external passage becoming obstructed from wax, mucus, or some foreign substance getting into the ear.

I lay no claims to originality, in the course of treatment I have been in the practice of pursuing, but will merely state facts as they have come under my notice, with the wish, if others have not prescribed the same course of treatment, that they will give it a fair trial. A large number of cases of morbid hearing, and some of long standing, have come under my observation within the last three or four years, and when they were produced by the above mentioned causes, I have generally been successful in curing, or greatly relieving the patients. My directions are as follows: to have the meatus auditorius thoroughly cleansed, I cause to be dropped into the ear night and morning for five or six days, a few drops of olive oil or the oil of almonds, and injecting with a very small syringe, once a day, a solution of the best castile soap in warm water, with a little eau de colonge, in the proportions of six parts of the solution, to one of the cologne. When on examination I find the ear perfectly clean, I then commence with the creosote, which, I think, will act more speedily and efficaciously by stimulating and producing a healthy action in the parts diseased, than any application I have ever yet seen used. I commence with the following formula:

℞.—Creosote, ℥ss.
Ol. Amygdalæ, ℥iv.
M.

I am particular to obtain a camel's hair brush, of good size, with long hair, so that the mixture may be well applied, being particular to introduce it far into the ear. After a few days, I usually increase the quantity of creosote as occasion may re-

quire, often using it as strong as one part of creosote to three of the oil of almonds. In pursuing this course, I have never found it produce any unpleasant symptoms, but an agreeable sensation of warmth. The duration of treatment, of course, varies according to circumstances, from three weeks to three months. While using the creosote, I syringe into the ears, every other day, the solution of soap and cologne; and, in the majority of cases use derivations behind the ears; also, occasionally, some general directions are necessary.

Looking over my note book, I find a number of interesting cases, but I will mention only two or three. About a year ago, Mrs. E., of New York, aged about 45 years, on a visit to this city, informed me that about six years previous, she found her hearing gradually failing—knew of no assignable cause. When I saw her, it was with great difficulty I could make her hear, although I spoke very loud, and she used a trumpet. Yet she told me, that when riding over the pavements in a carriage, she could hear as well as any one. This being a case of "paracusis perversæ," and of rare occurrence, I immediately became interested. I accordingly invited the lady to ride with me, and soon found that when we were travelling very quick, and the carriage making much noise, her hearing was very acute; indeed she could hear better than I could. As the lady had submitted to various modes of treatment, without any good resulting, I thought it to be a fair chance to try the creosote, and I was pleased, in a short time, to find it had given tone to the debilitated organs, and improved the hearing rapidly, so that in four months she could hear as well as before the attack.

Last April I was called to see Mrs. H., of New Hampshire, who had come to this city for medical advice. I learned from her that about ten years previous she had been attacked with a disease of the spine, and as she convalesced, her hearing gradually failed, so that at the time I saw her, she used an ear trumpet, and then could only hear when I spoke in a very loud tone. I examined the case, and found the deafness was in consequence of a want of action in the ceruminous glands. I immediately commenced the treatment before mentioned, and in about three weeks, on calling to see her one morning, she met me, "with joy sparkling in her eyes," and informed me that she had that morning heard the ticking of her watch, the first time for six years: in six weeks she attended church and could perfectly understand the clergyman, without the ear trumpet, which was to her a source of infinite satisfaction, as she was a remarkably pious lady.

A gentleman, teacher in one of the public schools, has,

under my directions, been using the creosote for a few weeks, and has quite recovered his hearing: he was about relinquishing his school, when he applied to me, in consequence of his deafness, which had been getting worse for the last three or four years.

I might mention many more cases but these I think sufficient. It is of course not expected that the creosote will be of any benefit in those cases where there is mal-formation, or total obliteration of the Eustachian tube; but these cases are of rare occurrence, compared with those I have mentioned.

Medical Examiner. May 20, 1840.

Abernethy as a Lecturer.—The lecture-room was the grand theatre upon which Mr. Abernethy displayed; there, indeed, he "shone eccentric like a comet's blaze!" and there he would indulge his disposition and propensities to an extent which occasioned the pupils frequently to regard it as an exhibition, and call it an "Abernethy at Home." His mode of entering the lecture-room was often irresistibly droll—his hands buried deep in his breeches-pockets, his body bent slouchingly forward, blowing or whistling, his eyes twinkling beneath their arches, and his lower jaw thrown considerably beneath the upper. Then he would cast himself into a chair, swing one of his legs over an arm of it, and commence his lecture in the most *outre* manner. The abruptness, however, never failed to command silence, and rivet attention.

"'The Count was wounded in the arm—the bullet had sunk into the flesh—it was, however, extracted—and he is now in a fair way of recovery.' That will do very well for a novel, but it won't do for us Gentlemen: for 'Sir Ralph Abercromby received a ball in the thick part of his thigh, and it buried itself deep: and it got among important parts, and it couldn't be felt; but the surgeons, nothing daunted, groped, and groped, and groped,———and Sir Ralph died.'"

Abernethy at the last.—His eccentricity continued during his existence, and towards the last he is reported to have joked upon the œdematous state of his legs produced by the disturbance of the circulation and his difficulty of breathing. Some one inquired of him how he was? to which he replied, "Why, I am better on my legs than ever: you see how much stouter they are?" His hobby retained full possession also to the end of his life. He attributed his disease to the stomach. He said, "it is all stomach; we use our stomach ill when we are young, and it uses us ill when we are old." But it is not

a little singular, that he expressly enjoined that no examination of his body should take place!—*Medico-Chirurgical Review.*

State of the Faculty and of Physic in Algiers.—Physic would seem to be at a low ebb in Algiers. The doctors certainly are so. The following extract from an extract in the Medical Gazette will exhibit the state of things in that country.

"Dr. Bohn first introduced vaccination, and practised it in the family of the deposed Dey himself, who, however, did not give him a princely fee; and, generally speaking, people are here unwilling to give aught to physician or apothecary.

As to the native physicians, the Dey had a kind of protomedicus, who decided medico-legal questions, and created other physicians for a few piasters, without being exactly able to read or write. If a man was able to shave well, if he could compound a plaster, and cure a hurt, he bought the privilege, and prescribed at his own pleasure the whole contents of any of the six Moorish apothecaries' shops; bark with or without theriaca at all times; and in all fevers, opium, sarsaparilla, calomel, pimento, cantharides, and opodeldoch. Ismael Ben Mehmed enjoyed the greatest share of public confidence; he gave Dr. Schonberg an extract from the Arabic work of Ben Huesina, who lived 700 years ago, and a catalogue of his own drugs. His shop, the largest in the town, contained 70 jars, 30 bottles, 20 boxes and several drawers. He obtained medicines from abroad, prepared others himself, and possesses a still and retort. He is afraid of mercury against syphilis, and thinks he can do without it.

Ismael Ben Mehmed is acquainted with remittent and intermittent fevers, and their varieties. His surgical apparatus consisted of a common case of dressing instruments."

Medico-Chirurgical Review.

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Veratrine, Delphine and Aconitine, *in Neuralgia, Rheumatism*, and *other diseases*. By Samuel A. Cartwright, M. D., of Natchez.

Dr. Cartwright, during his late visit to this city, related to us some striking cases of cure by the external application of these new and most active remedies. At our request, he furnished us with the following communication, which we hope will lead some of our readers to make a trial of the articles, and report to us the results of their experience. Dr. Cartwright has seen acute rheumatism, neuralgia, and tooth-ache effectually and promptly relieved by friction with the ointments; and although he does not profess to have used them extensively in his own practice, his experience strengthens the good opinion he formed of them while witnessing their action in the hospitals of London and Paris. Y.

Dear Sir:—It is near bed-time, and I leave the city in the morning in quest of health. I have not time to write an essay, but as you took so deep an interest in the cases which I mentioned to you that I had seen treated successfully with certain alkaloids, I herewith leave with you a few extracts from my note-book, compiled from clinical observations made in Europe. As I have nothing original to offer in

regard to the use of the new medicines, I think it better to copy my European notes than to enter into any details of my own experience: that experience, as far as it goes, is favorable.

I will, therefore, copy the various formulas in which I have seen these new medicines, in the various hospitals of London and Paris: secondly, enumerate the principal diseases in which they have been used with more or less success; and thirdly, the manner of using them. Although I write in great haste, you may rely on the correctness of the formulas, as I had plenty of leisure while abroad, and was very particular, deliberate and careful in taking my notes.

(1.) ***Veratria Ointment.*** (Veratrum Sabadilla.)

℞ Veratria ℥ss.
Ol. Oliv. ℥j.
Adip. ppt. ʒj. M. fiat ung

Veratria Embrocation.

℞. Veratria ℥j.
Sp. rect. ℥j. M.

Veratria Pills.

℞. Veratria gr. j.
Extract Hyosciam.
Pulv. glycyrrhiz. aa grs. xij. m. ft. Pil. Xij. Dose, one pill every three hours.

Delphinia Ointment. (Delphinium Staphysagria.)

℞. Delphinia ℥ss.
Ol. oliv. ℥j.
Adip. ppt. ʒj. M. ft. ung.

Delphinia Embrocation.

℞. Delphinia ♁j.
Sp. rect. ʒij. M. ft. embroc.

Delphinia Pills.

As the Veratria pills

Aconitine Ointment. [Aconitum Napellus.]

℞. Aconitina grs. xvj.
Ol. oliv. ℥ss.
Adip. ppt. ʒj. M.

Aconitine Embrocation.

℞. Aconitina grs. viij.
Sp. rect. ʒij. M.

Aconitine Pills.

After the same formula as the veratria and delphinia pills,

The *tincture of aconite* is made by macerating one pound of coarsely powdered aconite root in two pounds of alcohol, seven days, and filtering.

The *delphinia* is made by evaporating to a thin extract a saturated tincture of the seed of the stavesacre, (Delphinium Staphysagria,) and treating it with water acidulated with sulphuric acid, filtering the solution, and precipitating it by ammonia—freeing the precipitate from its water by taking it up by alcohol, and again reducing it to an extract. Then dissolve the extract by acidulated water, and add nitric acid while a precipitate falls. The liquid freed from this precipitate, ammonia is added, and the powder thrown down and dried. It is white.

The extract of *aconite* is made by evaporating the tincture to an extract. The *aconite* pills are made after the same formula as the *aconitine* pills, using twice the quantity of the alcoholic aconite extract in lieu of the aconitine. Twelve aconitine pills contain one grain of aconitine; and twelve aconite pills contain two grains of the extract of aconite. The dose of the former is one twelfth of a grain and of the latter, one-sixth of a grain.

The extract of sabadilla is made by evaporating the tincture of the seeds of the veratrum sabadilla, to the consistence of an extract. The sabadilla pills are made after the formula of the veratria pills, using, however, two grains of the alcoholic extract of sabadilla, in place of one grain of veratria.

The *tincture of stavesacre* is made after the same manner as the tincture of sabadilla, using the powdered seed of the stavesacre, for those of the sabadilla.

The *ioduretted veratrine ointment* is made by substituting half a drachm of the hydriodate of potash for the olive oil, in the preparation of the veratria ointment.

2. The diseases in which some one or more of the foregoing preparations have been found more or less useful, are tic douloureux rheumatism, acute and chronic, croup, angina pectoris, gout, dropsy, spasms of the stomach, tooth-ache, scrofulous swellings, capsular cataracts, iritis, internal opthalmia, amaurosis, and hypertrophy of the membranes in general, and a variety of indurations, thickenings and swellings.

3. *Manner of using the remedies.*—The hand is to be kept moist with any one of the ointments, and rubbed briskly, and with some

little force, over the affected part for ten or fifteen minutes, or more. There is no fear, says Mr. Turnbull, of London, of using the friction too long. He assured us that when used beyond a certain point, the electro-stimulation became unsupportable. This stimulation, he contended, must be fully induced before the sanative effect of the remedy can be expected. What he calls *electro-stimulation*, is a sense of pricking and numbness in the parts subjected to the friction. The ointments do not chafe or irritate the skin. They are applied generally two or three times a day, but in violent cases they are used oftener—say, every three hours, until the electro-stimulation is fully induced, and the disease relieved; then to be gradually discontinued.

The tinctures and embrocations are used pretty much after the same manner with the ointments. The internal use of the medicines did not fall under my observation; but when the electro-stimulation cannot be sufficiently induced by their external use, the pills are advised both by the London and Paris physicians—one, for example, every three hours.

The several preparations above mentioned, have nearly the same effects. The veratrine, delphine and aconitine ointments, embrocations and tinctures, are alternately used, to induce, in the first place, the electro-stimulation, and, in the second, to keep up that stimulation. Some persons are not affected by one, when they would be by another; and the same preparation after being continued for some time, loses its effect in some cases, and hence recourse should be had to another. In croup, the ointment is rubbed over the throat—in neuralgia, over the affected nerve.

One of the surgeons of St. Bartholomew's hospital, in a case of tic douloureux, made an ointment of aconitine, five grains, rubbed with five drachms of cerate. He applied a very small quantity with his finger over the painful nerve, once or twice a day, for six days. It produced numbness over the jaw for twelve or eighteen hours. The aconitine was prepared by Mr. Mordon, of Southampton-row, London, who is said to make the purest article.

In affections of the eyes, the ointment is rubbed over the forehead. The ointments are applied with the hand: a sponge is used in applying the tinctures and embrocations. The medicines are all very costly, and are apt to be adulterated, or improperly prepared. When genuine, they nearly always promptly produce a degree of numbness, and a pricking sensation on the surface to which they are applied. Their application to blistered surfaces, and to the mucous

membranes had been ventured on, but great caution is necessary in this mode, as the experience with them thus applied, is not sufficient to enable us to form rules.

When I was in London, Dr. Turnbull was preparing a work on the above remedies. S. A. C.

Louisville, June 16, 1840.

MEDICAL GRADUATES IN THE UNITED STATES IN 1840.

University of Pennsylvania 163; Transylvania University 60; Jefferson Medical College 57; Medical Institute of Louisville 39; Washington University of Baltimore 19; University of Maryland 14; Medical Department of Pennsylvania College 25; Medical College of South Carolina 65.

It has been remarked truly, that the proportion of Students of Medicine to the population of the United States, is greater than exists in any other country. The population of Prussia is thirteen millions, and in 1835 the number of native students there was 699. In France, the same year, with a population of thirty-three millions there were 2, 672 Students of Medicine, many of whom were foreigners. The number in attendance upon all the Medical Schools in the United States, last winter, we have elsewhere stated at about 2,450. With less than half the population of France, we have an equal number of native Students of Medicine, and the fact, we suppose, may thus be accounted for. 1st. The nature of our political institutions favors the multiplication of professional men. Every man who is able educates his sons, and all offices are open alike to all classes of citizens. The professions of law and medicine are the chief roads to distinction, and being free to all are crowded by candidates. 2d. The amount of disease in the United States is proportionably greater than in any of the countries of Europe. This fact, we presume, is well established, and explains the necessity for a more numerous medical corps. 3d. The sparseness of our population greatly increases the labor of physicians, and makes a larger number necessary. After all, probably more engage in the profession than find it profitable, and hence it is that so large a number, after attending one course of lectures, and more after taking their degrees, abandon it for other pursuits. Y.

CASE OF FORCIBLE REMOVAL OF THE UTERUS AND ITS APPENDAGES, AFTER THE EXPULSION OF THE FŒTUS.

We are indebted to Dr. Drane, of this city, for the following particulars of this most extraordinary case. A woman residing in Oldham county, in this State, was attended by a midwife in her fourth or fifth confinement. Shortly after the birth of the child, the midwife applied herself to the task of removing the placenta, and seizing hold of the os tincæ, which was taken for the placenta, she applied such extractive force as to lacerate the vaginal and ligamentous attachments of the uterus, and bring away the entire organ with the remnants of its ligaments, the Fallopian tubes and ovaria. Very little hemorrhage followed this rude operation, but the patient being alarmingly prostrated by the violence she had suffered, Dr. Ballard, of Westport, was summoned to her assistance. When the Dr. arrived and inquired concerning the delivery, he was informed by the midwife that the patient was cleared, and his attention was directed to a vessel containing the supposed after-birth, as evidence that she had performed her whole duty. He was surprised and alarmed for the safety of his patient to find on examination that it was the uterus and its appendages, which were deposited in the vessel, and on making a section of the uterus, the placenta was found enclosed in its cavity.

Dr. Drane did not see the patient nor is he informed as to the history of the case after the accident; he only knows that, without any very serious consequences, the woman recovered perfectly; that she is at this time alive and in good health, and has borne no children since her mutilation. He had more than one opportunity of examining the parts, preserved by Dr. Ballard and, perhaps, still in his possession, and he assures us unequivocally that they comprise the uterus, containing the placenta, the tubes, ovaria, and portions of the uterine ligaments. We have such confidence in his good faith and competency to decide on such questions, that ocular demonstration could not make us more certain of the fact.

This case, as far as our recollection serves us, is unique in the annals of obstetric medicine. There are well authenticated instances of inversion of the uterus following delivery, wherein the organ has been ignorantly torn away, or has been lost by inflammation and sloughing. In the Medico-Chirurgical Review, vol. xxiv. p. 482, a case of this kind is recorded, which had been considered of

sufficient interest to be published in pamphlet form by Mr. Cooke. As this able periodical may not be in the hands of all our readers, or this case may have been overlooked by them, we shall make no apology for extracting the following summary of it, premising the single remark, that as the placenta was naturally and promptly expelled and the inversion took place twenty-four hours after delivery, apparently in consequence of the woman's rising to urinate, and as when the midwife was summoned, although only a few hours had elapsed, the uterus was detached and removed merely by her lifting it gently with her hands, it is difficult to account for its separation, unless we suppose that the patient herself had inadvertently attempted to tear it away.

"At 4 A. M. of the 22d of May, 1835, a midwife of Coventry, was sent for to a woman in labour. On her arrival, she found the woman, who had already been in labour 48 hours, upon her knees, and insisting upon being delivered in that position, as being the custom of her country (Ireland.)

"With some difficulty she induced her to lie upon the bed, in order, by an examination of the parts, to ascertain how far the labour had advanced. Upon this being done, the Os Tincæ was found dilated to about the size of half-a-crown; the child's head presenting as usual. Every thing went on well, and the woman was delivered at seven o'clock the same evening of a living child. The placenta followed whole in a quarter of an hour, being expelled by a pain.

"No hæmorrhage whatever ensued at the time, although a considerable quantity of blood was lost during the night. The after-pains were trifling, and when the midwife visited her the next morning, she appeared in a very satisfactory state. So well, indeed, did she feel, that notwithstanding the strict injunctions of the midwife to the contrary, she partook plentifully of animal food, immediately after her departure. At 4 A. M. of the 24th the midwife was again hastily summoned. She ascertained the following particulars:—that the woman had risen during the night, and had gone into an adjoining room to make water; that whilst there she had, by her screams alarmed her husband, who called in some of the neighbours, and upon entering the apartment, they found the woman seated on a stool, before the fire, with a vessel of warm water in front of her, and a large substance, which they compared to a child's head and neck, lying between her thighs, supported by her hands. They then sent for the midwife, believing it to be a case of twins, and being greatly alarmed at the quantity of blood she had lost, the hæmorrhage having been profuse. She was now lying on the bed, pale from the loss blood, which had been excessive. On examination, the midwife discovered a hard substance, lying on the bed, loosely connected to the vagina by a shred of membrane only. This substance she immediately recognized as the Uterus, and lifting it

gently removed it without difficulty or effort, and placed it in a wooden bowl. The hæmorrhage then ceased, and the midwife, after a short delay, left the house, taking the uterus to our author's father. He found that it really was an uterus inverted. The only part absent was, the left ovary. Mr. Cooke, senior, visited the woman at 11 A. M. and found her completely exhausted from the hæmorrhage, (which by this time had ceased;) she was extremely restless and agitated, constantly throwing her arms about; pulse scarcely perceptible. Upon enquiry he found she had passed some urine shortly after the loss of the uterus, as also between 9 and 10 the following morning (Saturday.) He was also informed that her bowels had not been relieved for a period of at least 9 days before delivery, except a mass of hardened fæcal matter which was discharged, with the last pain in the labour. The woman did not much complain of any sensation like bearing down, nor of any substance lying in the vagina. She did not appear to suffer much from pain; neither was there much distention of the Abdomen, nor was there then or at any time during the progress of the case any thing amounting to more than a slight degree of tenderness, which, however, was hardly noticed except upon pressure. As there was no protrusion of the pelvic or abdominal viscera, and as there were no urgent symptoms, Mr. C. determined not to incur any risk by instituting an examination per vaginam. He merely enjoined quietude and the horizontal posture, with a light farinaceous diet.

"In the afternoon the pulse rose to 140. The patient passed her urine freely during the night, and next day presented no unfavourable symptoms. In short, no material symptoms ensued, and she perfectly recovered without any surgical, and scarcely any medical treatment."

This case is interesting to the physiologist as well as to the accoucheur, inasmuch as it presented a striking illustration of the close sympathy which exists between the uterus and mammae, which might have been observed, we doubt not, in Dr. Ballard's case.

We are informed that "previous to her confinement, milk was secreted in considerable quantity, but immediately after the loss of the Uterus this secretion, together with that of the Lochia was arrested. Notwithstanding this, and in spite of the remonstrances which were made to her on the subject, she persisted in applying the child to the breast, which induced considerable pain and hardness of the right mamma, attended with a good deal of febrile excitement. These symptoms subsided upon the exciting cause being removed. When her health had been in some degree re-established, she again gave the child the breast, and persevered in doing so during several weeks, until finding that she had no milk she finally desisted."

It is furthermore interesting, because it shows that notwithstand-

ing the preservation of one ovary, all sexual desires and feelings were entirely wanting, although sexual intercourse has repeatedly been had with her husband, no mechanical obstruction whatever existing. This is contrary to what obtains with the other sex, for ridgelings, it is well known, retain their sexual propensities.

H. M.

CASE OF ARTIFICIAL ANUS CURED.

Dr. John Clark, of Morgan co., Ohio, has sent us the notes of a case of strangulated inguinal hernia, terminating in sphacelus and the formation of an artificial anus, which was promptly and effectually cured by using the forceps of Dupuytren. The patient, a female 50 years old, obstinately resisted the proposal to operate for the strangulation, and finally submitted to one still more distressing, for the depth and inflamed state of the walls of the great excavation almost rendered the proper application of the forceps impracticable. One resort to them proved to be sufficient. Their application was productive of a fit of deep nervous prostration, which was relieved by stimulants. The Doctor informs us, that before the operation, alimentary matter, [illegible] and fæcal matter, distinct from each other flowed, at different times, through this artificial aperture. D.

PERMANENT CURE OF HERNIA FROM FRACTURE OF THE UPPER EXTREMITY OF THE FEMUR BONE.

A distinguished member of the Kentucky bar, when 47 years of age, became affected with scrotal hernia of the right side, for which he was under the necessity of wearing a truss. Judging from the size of the tumor, when the viscera were allowed to descend, the aperture was large. When 57 years old he was overturned in a stage coach, and the upper end of his right thigh bone was fractured. The diagnosis of his medical attendants, was "fracture of the *neck* of the bone," but whether of that part or not, is of no moment, in reference to its effect on the hernia. A great deal of inflammation followed the injury, and when he had so far recovered as to walk about, he found that the hernia did not re-appear. He did not resume his truss, and ten years have since elapsed, without any return of the rupture. In short, the inflammation consequent upon the injury, led to a closure of the hernial aperture. D.

TREATMENT OF DYSMENORRHŒA WITH THE PESSARY.

Our friend, Dr. Mosby, of this city, has been in the habit for many years, of treating dysmenorrhœa, by the introduction, on the approach of the catamenial period, of a pessary, carried high into the vagina. He supposes, that in these cases, the uterus is engorged, and at the same time is drawn or pressed down into the pelvis, where it is compressed and in some degree strangulated. He has seen the pain instantly relieved, by pushing up the organ and sustaining it by a pessary. His practice is to administer a cathartic previously to the attack. D.

FEVERS IN ALABAMA IN THE AUTUMN OF 1839.

In our first number we alluded to the extensive prevalence and mortality of the fevers of the south-west, during the past autumn, and solicited from the physicians of that region communications on the subject. We received from Dr. James C. Harris, of Jefferson, Alabama, a letter from which, although not intended for publication, we make the following extract, presenting his views of the cause and best mode of treating these fevers:

"Since the fall of 1822, when the whole valley of the Alabama was laid under disease, depopulating Cahawba, the then seat of government, so much fever has not been amongst us. Mobile, our emporium, has again been visited with yellow fever, of a most malignant type, killing, as I have been credibly informed, at least one-third of all that were attacked. At other places, the poison being less concentrated, the cases assumed a bilious congestive character, passing readily, under judicious treatment, into the remittent and intermittent forms. The ætiology of this state of things is to be found in the peculiar character of the past seasons—the luxuriance of all species of vegetation, the heat, and the protracted drought. The latter probably prevailed to a greater extent in this country, than was ever known since its early settlement, the dust lying in the roads like a bed of hot ashes, and rising in clouds almost sufficient to suffocate the traveller. The Alabama river, the Coosa, Tallapoosa, and all their tributary streams, were considerably lower than they have been known within the recollection of the oldest inhabitants. A similar combination of circumstances occurred, we are informed by *Hustis*, in his valuable work on the diseases of our State, during the summer and fall of 1822.

In the management of the cases that have occurred under my observation, the lancet, emetics, calomel, the warm bath and blisters, varied to suit the different stages of the epidemic, have been attended almost universally with success. True, I have seen in consultation, a few cases where there appeared to be a continual disposition in the system to sink; and some others where the pain in the bowels was extremely distressing, in which it was exceedingly difficult to procure proper evacuations from the liver. In the first of these conditions, sinapisms and blisters to the extremities and epigastrium, hot brandy toddy, and calomel and quinine combined, in the proportion of 10 grs. of the former to 5 grs. of the latter, repeated at intervals of two hours, and continued until three or four doses had been given, generally effected the ends desired. In the latter cases, the lancet, the warm bath, and calomel, conjoined with tart. emet. or ipecac, and aided by oil and stimulating enemas, have more certainly, and much more safely, in my opinion, accomplished all that could have been anticipated from the more active purgatives, particularly such as the croton oil, gamboge, scammony, &c. The relaxing and powerfully remedial effects of the lancet, under such circumstances, can only be fully appreciated by those who have witnessed its beneficial results; and although I have not ventured on its employment more than twice during the actual chill, still I have repeatedly employed it in cases of deep congestion, where the extremities and surface were cool, and the prostration sudden and apparent, and in every instance, so far as I now recollect, with good effect. So thoroughly am I impressed with the importance of the lancet, in all febrile affections, that I have been led sometimes almost to conclude, that were it practised now, as in the days of *Rush*, the size of all our purgative remedies might be very considerably reduced, and as beneficial results might be obtained from 20 grs. of calomel, combined with a small proportion of tartar emetic or ipecac, as from 50 or 100 grs. of the former article, unaided and uncombined—and that, too, with much less danger of doing permanent injury to the system. But where copious depletion has been neglected in the forming stages of our fevers, and dangerous and extensive determinations take place, large doses of calomel may be employed with safety and advantage. This subject occupied my thoughts at an early period of my professional career, and the above is stated as the result of my experience, in public and private practice for seven or eight years." Y.

November, 1839.

SURGICAL ANATOMY AND OPERATIVE SURGERY.

PROFESSOR GROSS is engaged in preparing a work on these subjects, which will comprise the anatomy of those parts of the body which are the chief seats of surgical operations, with an account of the most approved methods of performing them; to be illustrated with colored engravings and numerous wood cuts. It will be comprised in one volume, octavo, of about six hundred pages, and put to press early next spring.

We are happy to know that the Elements of Pathological Anatomy of this gentleman, meet with the approval of the profession wherever the work is disseminated.

We shall give a short analytical notice of it in an early number of the Journal. D.

BOSTON MEDICAL AND SURGICAL JOURNAL—PROFESSOR GROSS.

OUR able and respected contemporary, in noticing the appointment of Dr. Gross to the chair of Surgery in the Medical Institute of Louisville, indulges in a remark which shows that the editor has been prejudiced by a one-sided report of the circumstances which brought about the resignation of the late Professor of Surgery. The editor of the Boston Medical and Surgical Journal, we are sure, would not willingly be instrumental in propagating a false impression with regard to his brethren. We assure him that he has been misled, and that, if he will inform himself as to the facts of the case, he will find no cause for the offensive reflection contained in the following notice:

"*Dr. Gross.*—It has been officially announced that Samuel D. Gross, M. D., was elected, at a late meeting of the trustees, professor of Surgery in the Louisville Medical Institute, to the chair vacated by the resignation of Dr. Flint. A personal acquaintance with Dr. Gross, together with an intimate knowledge of his writings, constrain us to say that the Louisville School has been exceedingly fortunate in securing this gentleman's sevices. May he never be assailed by the spirit of envy, or brow-beaten by those who suppose that talents of a high order are dangerous to the weal of those less gifted. Through the pages of his great work on Pathological Anatomy, now circulating through the land, those who are curious to know the claims of Dr. Gross to the confidence of those who control the destiny of the Louisville Institute, will find ample evidence of his fitness for the station to which he has been unanimously called." Y.

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little force, over the affected part for ten or fifteen minutes, or less. There is no fear, says Mr. Turnbull, of using the friction too long. He assured us that when used beyond a certain point, the electro-stimulation became insupportable. This stimulation, so extended, must be fully induced before the sanative effect of the remedy can be expected. What he calls *electro-stimulation*, is a sense of pricking and numbness in the parts subjected to the friction. The ointments do not chafe or irritate the skin. They are applied generally two or three times a day, but in violent cases they are used oftener—say, every three hours, until the electro-stimulation is fully induced, and the disease relieved; then to be gradually discontinued.

The tinctures and embrocations are used pretty much after the same manner with the ointments. The internal use of the medicines did not fall under my observation; but when the electro-stimulation cannot be sufficiently induced by their external use, the pills are also used both by the London and Paris physicians—one, for example, every three hours.

The several preparations above mentioned, have nearly the same effects. The veratrine, delphine and aconitine ointments, embrocations and tinctures, are alternately used, to induce, in the first part, the electro-stimulation, and, in the second, to keep up that stimulation. Some persons are not affected by one, when they would be by another; and the same preparation after being continued for some time, loses its effect in some cases, and hence recourse should be had to another. In croup, the ointment is rubbed over the throat—in neuralgia, over the affected nerve.

One of the surgeons of St. Bartholomew's hospital, in a case of inflammation, made an ointment of aconitine, five grains, rubbed with five drachms of cerate. He applied a very small quantity with the finger over the painful nerve, once or twice a day, for six days. It produced numbness over the jaw for twelve or eighteen hours. The aconitine was prepared by Mr. Morson, of Southampton-row, London, who is said to make the purest article.

In affections of the eyes, the ointment is rubbed over the forehead. The ointments are applied with the hand; a sponge is used in applying the tinctures and embrocations. The medicines are all very costly, and are apt to be adulterated, or improperly prepared. When genuine, they nearly always promptly produce a degree of numbness, and a pricking sensation on the surface to which they are applied. Their application to blistered surfaces, and to the mucous

membranes had been ventured on, but great caution is necessary in this mode, as the experience with them thus applied, is not sufficient to enable us to form rules.

When I was in London, Dr. Turnbull was preparing a work on the above remedies. S. A. C.

Louisville, June 16, 1840.

MEDICAL GRADUATES IN THE UNITED STATES IN 1840.

University of Pennsylvania 163; Transylvania University 60; Jefferson Medical College 57; Medical Institute of Louisville 39; Washington University of Baltimore 19; University of Maryland 14; Medical Department of Pennsylvania College 25; Medical College of South Carolina 65.

It has been remarked truly, that the proportion of Students of Medicine to the population of the United States, is greater than exists in any other country. The population of Prussia is thirteen millions, and in 1835 the number of native students there was 699. In France, the same year, with a population of thirty-three millions there were 2, 672 Students of Medicine, many of whom were foreigners. The number in attendance upon all the Medical Schools in the United States, last winter, we have elsewhere stated at about 2,450. With less than half the population of France, we have an equal number of native Students of Medicine, and the fact, we suppose, may thus be accounted for. 1st. The nature of our political institutions favors the multiplication of professional men. Every man who is able educates his sons, and all offices are open alike to all classes of citizens. The professions of law and medicine are the chief roads to distinction, and being free to all are crowded by candidates. 2d. The amount of disease in the United States is proportionably greater than in any of the countries of Europe. This fact, we presume, is well established, and explains the necessity for a more numerous medical corps. 3d. The sparseness of our population greatly increases the labor of physicians, and makes a larger number necessary. After all, probably more engage in the profession than find it profitable, and hence it is that so large a number, after attending one course of lectures, and more after taking their degrees, abandon it for other pursuits. Y.

CASE OF FORCIBLE REMOVAL OF THE UTERUS AND ITS APPENDAGES, AFTER THE EXPULSION OF THE FŒTUS.

We are indebted to Dr. Drane, of this city, for the following particulars of this most extraordinary case. A woman residing in Oldham county, in this State, was attended by a midwife in her fourth or fifth confinement. Shortly after the birth of the child, the midwife applied herself to the task of removing the placenta, and seizing hold of the os tincæ, which was taken for the placenta, she applied such extractive force as to lacerate the vaginal and ligamentous attachments of the uterus, and bring away the entire organ with the remnants of its ligaments, the Fallopian tubes and ovaria. Very little hemorrhage followed this rude operation, but the patient being alarmingly prostrated by the violence she had suffered, Dr. Ballard, of Westport, was summoned to her assistance. When the Dr. arrived and inquired concerning the delivery, he was informed by the midwife that the patient was cleared, and his attention was directed to a vessel containing the supposed after-birth, as evidence that she had performed her whole duty. He was surprised and alarmed for the safety of his patient to find on examination that it was the uterus and its appendages, which were deposited in the vessel, and on making a section of the uterus, the placenta was found enclosed in its cavity.

Dr. Drane did not see the patient nor is he informed as to the history of the case after the accident; he only knows that, without any very serious consequences, the woman recovered perfectly; that she is at this time alive and in good health, and has borne no children since her mutilation. He had more than one opportunity of examining the parts, preserved by Dr. Ballard and, perhaps, still in his possession, and he assures us unequivocally that they comprise the uterus, containing the placenta, the tubes, ovaria, and portions of the uterine ligaments. We have such confidence in his good faith and competency to decide on such questions, that ocular demonstration could not make us more certain of the fact.

This case, as far as our recollection serves us, is unique in the annals of obstetric medicine. There are well authenticated instances of inversion of the uterus following delivery, wherein the organ has been ignorantly torn away, or has been lost by inflammation and sloughing. In the Medico-Chirurgical Review, vol. xxv. p. 482, a case of this kind is recorded, which had been considered

sufficient interest to be published in pamphlet form by Mr. Cooke. As this able periodical may not be in the hands of all our readers, or this case may have been overlooked by them, we shall make no apology for extracting the following summary of it, premising the single remark, that as the placenta was naturally and promptly expelled and the inversion took place twenty-four hours after delivery, apparently in consequence of the woman's rising to urinate, and as when the midwife was summoned, although only a few hours had elapsed, the uterus was detached and removed merely by her lifting it gently with her hands, it is difficult to account for its separation, unless we suppose that the patient herself had inadvertently attempted to tear it away.

"At 4 A. M. of the 22d of May, 1835, a midwife of Coventry, was sent for to a woman in labour. On her arrival, she found the woman, who had already been in labour 48 hours, upon her knees, and insisting upon being delivered in that position, as being the custom of her country (Ireland.)

"With some difficulty she induced her to lie upon the bed, in order, by an examination of the parts, to ascertain how far the labour had advanced. Upon this being done, the Os Tincæ was found dilated to about the size of half-a-crown; the child's head presenting as usual. Every thing went on well, and the woman was delivered at seven o'clock the same evening of a living child. The placenta followed whole in a quarter of an hour, being expelled by a pain.

"No hæmorrhage whatever ensued at the time, although a considerable quantity of blood was lost during the night. The afterpains were trifling, and when the midwife visited her the next morning, she appeared in a very satisfactory state. So well, indeed, did she feel, that notwithstanding the strict injunctions of the midwife to the contrary, she partook plentifully of animal food, immediately after her departure. At 4 A. M. of the 24th the midwife was again hastily summoned. She ascertained the following particulars:—that the woman had risen during the night, and had gone into an adjoining room to make water; that whilst there she had, by her screams alarmed her husband, who called in some of the neighbours, and upon entering the apartment, they found the woman seated on a stool, before the fire, with a vessel of warm water in front of her, and a large substance, which they compared to a child's head and neck, lying between her thighs, supported by her hands. They then sent for the midwife, believing it to be a case of twins, and being greatly alarmed at the quantity of blood she had lost, the hæmorrhage having been profuse. She was now lying on the bed, pale from the loss blood, which had been excessive. On examination, the midwife discovered a hard substance, lying on the bed, loosely connected to the vagina by a shred of membrane only. This substance she immediately recognized as the Uterus, and lifting it

gently removed it without difficulty or effort, and placed it in a wooden bowl. The hæmorrhage then ceased, and the midwife, after a short delay, left the house, taking the uterus to our author's father. He found that it really was an uterus inverted. The only part absent was, the left ovary. Mr. Cooke, senior, visited the woman at 11 A. M. and found her completely exhausted from the hæmorrhage, (which by this time had ceased;) she was extremely restless and agitated, constantly throwing her arms about; pulse scarcely perceptible. Upon enquiry he found she had passed some urine shortly after the loss of the uterus, as also between 9 and 10 the following morning (Saturday.) He was also informed that her bowels had not been relieved for a period of at least 9 days before delivery, except a mass of hardened fæcal matter which was discharged, with the last pain in the labour. The woman did not much complain of any sensation like bearing down, nor of any substance lying in the vagina. She did not appear to suffer much from pain; neither was there much distention of the Abdomen, nor was there then or at any time during the progress of the case any thing amounting to more than a slight degree of tenderness, which, however, was hardly noticed except upon pressure. As there was no protrusion of the pelvic or abdominal viscera, and as there were no urgent symptoms, Mr. C. determined not to incur any risk by instituting an examination per vaginam. He merely enjoined quietude and the horizontal posture, with a light farinaceous diet.

"In the afternoon the pulse rose to 140. The patient passed her urine freely during the night, and next day presented no unfavourable symptoms. In short, no material symptoms ensued, and she perfectly recovered without any surgical, and scarcely any medical treatment."

This case is interesting to the physiologist as well as to the accoucheur, inasmuch as it presented a striking illustration of the close sympathy which exists between the uterus and mammae, which might have been observed, we doubt not, in Dr. Ballard's case.

We are informed that "previous to her confinement, milk was secreted in considerable quantity, but immediately after the loss of the Uterus this secretion, together with that of the Lochia was arrested. Notwithstanding this, and in spite of the remonstrances which were made to her on the subject, she persisted in applying the child to the breast, which induced considerable pain and hardness of the right mamma, attended with a good deal of febrile excitement. These symptoms subsided upon the exciting cause being removed. When her health had been in some degree re-established, she again gave the child the breast, and persevered in doing so during several weeks, until finding that she had no milk she finally desisted."

It is furthermore interesting, because it shows that notwithstand-

ing the preservation of one ovary, all sexual desires and feelings were entirely wanting, although sexual intercourse has repeatedly been had with her husband, no mechanical obstruction whatever existing. This is contrary to what obtains with the other sex, for ridgelings, it is well known, retain their sexual propensities.

H. M.

CASE OF ARTIFICIAL ANUS CURED.

Dr. John Clark, of Morgan co., Ohio, has sent us the notes of a case of strangulated inguinal hernia, terminating in sphacelus and the formation of an artificial anus, which was promptly and effectually cured by using the forceps of Dupuytren. The patient, a female 50 years old, obstinately resisted the proposal to operate for the strangulation, and finally submitted to one still more distressing, for the depth and inflamed state of the walls of the great excavation almost rendered the proper application of the forceps impracticable. One resort to them proved to be sufficient. Their application was productive of a state of deep nervous prostration, which was relieved by stimulants. The Doctor informs us, that before the operation, alimentary matter, bile and faecal matter, distinct from each other flowed, at different times, through this artificial aperture. D.

PERMANENT CURE OF HERNIA FROM FRACTURE OF THE UPPER EXTREMITY OF THE THIGH BONE.

A distinguished member of the Kentucky bar, when 47 years of age, became affected with scrotal hernia of the right side, for which he was under the necessity of wearing a truss. Judging from the size of the tumor, when the viscera were allowed to descend, the aperture was large. When 57 years old he was overturned in a stage coach, and the upper end of his right thigh bone was fractured. The diagnosis of his medical attendants, was "fracture of the *neck* of the bone," but whether of that part or not, is of no moment, in reference to its effect on the hernia. A great deal of inflammation followed the injury, and when he had so far recovered as to walk about, he found that the hernia did not re-appear. He did not resume his truss, and ten years have since elapsed, without any return of the rupture. In short, the inflammation consequent upon the injury, led to a closure of the hernial aperture. D.

TREATMENT OF DYSMENORRHŒA WITH THE PESSARY.

Our friend, Dr. Mosby, of this city, has been in the habit for many years, of treating dysmenorrhœa, by the introduction, on the approach of the catamenial period, of a pessary, carried high into the vagina. He supposes, that in these cases, the uterus is engorged, and at the same time is drawn or pressed down into the pelvis, where it is compressed and in some degree strangulated. He has seen the pain instantly relieved, by pushing up the organ and sustaining it by a pessary. His practice is to administer a cathartic previously to the attack. D.

FEVERS IN ALABAMA IN THE AUTUMN OF 1839.

In our first number we alluded to the extensive prevalence and mortality of the fevers of the south-west, during the past autumn, and solicited from the physicians of that region communications on the subject. We received from Dr. James C. Harris, of Jefferson, Alabama, a letter from which, although not intended for publication, we make the following extract, presenting his views of the cause and best mode of treating these fevers:

"Since the fall of 1822, when the whole valley of the Alabama was laid under disease, depopulating Cahawba, the then seat of government, so much fever has not been amongst us. Mobile, our emporium, has again been visited with yellow fever, of a most malignant type, killing, as I have been credibly informed, at least one-third of all that were attacked. At other places, the poison being less concentrated, the cases assumed a bilious congestive character, passing readily, under judicious treatment, into the remittent and intermittent forms. The ætiology of this state of things is to be found in the peculiar character of the past seasons—the luxuriance of all species of vegetation, the heat, and the protracted drought. The latter probably prevailed to a greater extent in this country, than was ever known since its early settlement, the dust lying in the roads like a bed of hot ashes, and rising in clouds almost sufficient to suffocate the traveller. The Alabama river, the Coosa, Tallapoosa, and all their tributary streams, were considerably lower than they have been known within the recollection of the oldest inhabitants. A similar combination of circumstances occurred, we are informed by *Hustis*, in his valuable work on the diseases of our State, during the summer and fall of 1822.

In the management of the cases that have occurred under my observation, the lancet, emetics, calomel, the warm bath and blisters, varied to suit the different stages of the epidemic, have been attended almost universally with success. True, I have seen in consultation, a few cases where there appeared to be a continual disposition in the system to sink; and some others where the pain in the bowels was extremely distressing, in which it was exceedingly difficult to procure proper evacuations from the liver. In the first of these conditions, sinapisms and blisters to the extremities and epigastrium, hot brandy toddy, and calomel and quinine combined, in the proportion of 10 grs. of the former to 5 grs. of the latter, repeated at intervals of two hours, and continued until three or four doses had been given, generally effected the ends desired. In the latter cases, the lancet, the warm bath, and calomel, conjoined with tart. emet. or ipecac, and aided by oil and stimulating enemas, have more certainly, and much more safely, in my opinion, accomplished all that could have been anticipated from the more active purgatives, particularly such as the croton oil, gamboge, scammony, &c. The relaxing and powerfully remedial effects of the lancet, under such circumstances, can only be fully appreciated by those who have witnessed its beneficial results; and although I have not ventured on its employment more than twice during the actual chill, still I have repeatedly employed it in cases of deep congestion, where the extremities and surface were cool, and the prostration sudden and apparent, and in every instance, so far as I now recollect, with good effect. So thoroughly am I impressed with the importance of the lancet, in all febrile affections, that I have been led sometimes almost to conclude, that were it practised now, as in the days of *Rush*, the size of all our purgative remedies might be very considerably reduced, and as beneficial results might be obtained from 20 grs. of calomel, combined with a small proportion of tartar emetic or ipecac, as from 50 or 100 grs. of the former article, unaided and uncombined—and that, too, with much less danger of doing permanent injury to the system. But where copious depletion has been neglected in the forming stages of our fevers, and dangerous and extensive determinations take place, large doses of calomel may be employed with safety and advantage. This subject occupied my thoughts at an early period of my professional career, and the above is stated as the result of my experience, in public and private practice for seven or eight years." Y.

November, 1839.

SURGICAL ANATOMY AND OPERATIVE SURGERY.

PROFESSOR GROSS is engaged in preparing a work on these subjects, which will comprise the anatomy of those parts of the body which are the chief seats of surgical operations, with an account of the most approved methods of performing them; to be illustrated with colored engravings and numerous wood cuts. It will be comprised in one volume, octavo, of about six hundred pages, and put to press early next spring.

We are happy to know that the Elements of Pathological Anatomy of this gentleman, meet with the approval of the profession wherever the work is disseminated.

We shall give a short analytical notice of it in an early number of the Journal. D.

BOSTON MEDICAL AND SURGICAL JOURNAL—PROFESSOR GROSS.

OUR able and respected contemporary, in noticing the appointment of Dr. Gross to the chair of Surgery in the Medical Institute of Louisville, indulges in a remark which shows that the editor has been prejudiced by a one-sided report of the circumstances which brought about the resignation of the late Professor of Surgery. The editor of the Boston Medical and Surgical Journal, we are sure, would not willingly be instrumental in propagating a false impression with regard to his brethren. We assure him that he has been misled, and that, if he will inform himself as to the facts of the case, he will find no cause for the offensive reflection contained in the following notice:

"*Dr. Gross.*—It has been officially announced that Samuel D. Gross, M. D., was elected, at a late meeting of the trustees, professor of Surgery in the Louisville Medical Institute, to the chair vacated by the resignation of Dr. Flint. A personal acquaintance with Dr. Gross, together with an intimate knowledge of his writings, constrain us to say that the Louisville School has been exceedingly fortunate in securing this gentleman's sevices. May he never be assailed by the spirit of envy, or brow-beaten by those who suppose that talents of a high order are dangerous to the weal of those less gifted. Through the pages of his great work on Pathological Anatomy, now circulating through the land, those who are curious to know the claims of Dr. Gross to the confidence of those who control the destiny of the Louisville Institute, will find ample evidence of his fitness for the station to which he has been unanimously called." Y.

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CATALOGUE OF THE CLASS.

THIRD SESSION, 1839—'40.

Names.	*Residence.*	*Preceptors.*
Samuel B. Abell,	Kentucky,	Dr. G. Forrest.
Howel C. Adams,	Tennessee,	Dr. B. F. Koen.
William H. Anderson,	Tennessee,	H. R. Hopson, M. D.
Thomas T. Armstrong,	Tennessee,	John McCall, M. D.
John M. Alexander,	Tennessee,	Wm. W. Thompson, M. D.
John Alexander,	Kentucky,	Dr. C. A. Rudd.
John E. Alexander,	Kentucky,	Dr. W. D. Jordan.
David J. Alcorn,	Kentucky,	Wm. Craig, M. D.
John L. Armington,	Indiana,	Wm. Armington, M. D.
J. S. Athon, M. D.,	Indiana.	
Thomas Bohannon,	Kentucky,	
Thomas Brandon,	Alabama,	Drs. C. & T. L. Caldwell.
Levi Blackwell,	Missouri,	John B. Thruston, M. D.
Francis B. E. Browne,	Alabama,	John P. Harrison, M. D.
Joseph Burr,	Indiana,	Benjamin Carter, M. D.
Henry L. Burt,	South Carolina,	W. L. Chamblin, M. D.
Joshua L. Bond,	Tennessee,	Dr. Daniel Richmond.
George W. C. Bond,	Tennessee,	Dr. Daniel Richmond.
Jesse S. Burford,	Tennessee,	Wm. C. White, M. D.
Edward Burns,	Ohio,	Thomas L. Moxley, M. D.
William M. Brooks,	Tennessee,	Drs. King & Donoho.
Samuel C. Bridgewater,	Tennessee,	Dr. H. Brooks.
Robert A. Brunson,	Tennessee,	Drs. King & Donoho.
John D. Bellah,	Tennessee,	G. D. Crosthwait, M. D.
James Best,	Kentucky,	N. T. Marshall, M. D.
John S. Booth,	Kentucky,	Dr. H. G. Davis,
Charles Baird,	Kentucky,	Robert Baird, M. D.
R. F. Bowers,	Kentucky,	
Charles W. Baker,	Missouri,	Practitioner.

Names	*Residence.*	*Preceptors.*
Isaac Bradstreet,	Mississippi,	John H. Reid, M. D.
Mathew H. Bone,	Kentucky,	Dr. N. Porter.
Leroy K. Branch,	Mississippi,	E. Kilpatrick, M. D.
William G. Benham,	Kentucky,	Theodore S. Bell, M. D.
Green G. Boyle,	Illinois,	A. Perkins, M. D.
Geo. W. Bayless, M. D.,	Kentucky.	
James F. Bull,	Kentucky,	Henry Miller, M. D.
Archibald M. Clemens,	Alabama,	Drs. Newman & Bassett.
Edwin T. Childress,	Tennessee,	B. M. Hughes, M. D.
High E. Cummings,	Tennessee,	Dr. Thomas Richmond.
Atrides Crow,	Kentucky,	Samuel O. Peyton, M. D.
James A. Carr,	Tennessee,	H. R. Hopson, M. D.
Preston Capshaw,	Alabama,	T. Stith Malone, M. D.
Sanford T. Clark,	Indiana,	John B. Clarke, M. D.
Walker B. Cowherd,	Kentucky,	John Hardin, M. D.
James M. Cromley,	Ohio,	E. Naret, M. D.
Benson E. Case,	Ohio,	Dr. Mount.
James W. Caldwell,	Tennessee,	A. B. Ewing, M. D.
Stephen Cooke, M. D.,	Kentucky.	
Moses C. Cook,	Missouri,	William Vanzandt, M. D.
James H. Charlton,	Tennessee,	
George E. Cooke,	Kentucky,	John E. Cooke, M. D.
James Clark,	Ohio,	John Eberle, M. D.
Joseph S. Deputy,	Indiana,	Joseph G. Norwood, M. D.
James S. Davis,	Alabama,	J. Spotswood, M. D.
James F. Dodds,	Indiana.	
Williamson P. Dunn,	Indiana,	Dr. A. Spear.
Chris A. Davis,	Illinois,	Dr. B. C. Wood.
Thomas B. Eastland,	Alabama,	J. S. Sandidge, M. D.
William D. Ellis,	Mississippi,	John H. Marable, M. D.
William A. Eastland,	Kentucky,	Dr. Joseph E. Akin.
Asbury Evans,	Kentucky,	Drs. Talbot & Wakefield.
Daniel M. Foster,	Indiana,	H. M. Dowling, M. D.
Samuel Fleming,	Tennessee,	E. Thompson, M. D.
William L. Felix,	Illinois,	Dr. John L. Felix.

Names.	*Residence.*	*Preceptors.*
John L. Ford,	Indiana.	J. S. Athon, M. D.
Lewis J. Frazee,	Kentucky,	Dr. John A. Coburn.
Abijah S. Frederick,	Kentucky,	Thomas H. Vance, M. D.
John W. Fraser,	Tennessee.	
Thomas W. Fry, M. D.,	Indiana.	
Thomas A. Glass,	Alabama.	A. Milliken, M. D.
Wm. Harrison Gardner,	Kentucky,	Drs. Ford & Sweeny.
Ambrose E. Geoghegan,	Kentucky,	Dr. T. D. Geoghegan.
Norvin Green,	Kentucky,	Drs. Rogers & Bullitt.
George W. Givens,	Kentucky,	J. S. Pierce, M. D.
Tarleton W. Graves,	Virginia.	
Henry Horan, M. D.,	Washington City.	
Thomas A. Hereford,	Alabama,	G. R. Wharton, M. D.
Robert B. Harper,	Tennessee,	Dr. S. Y. Griffin.
Rufus S. Harwell,	Tennessee,	Drs. Crump & Young.
Jerome B. Hinson,	Tennessee,	P. H. Mitchell, M. D.
Henry B. Haynie,	Tennessee,	Drs. Dickson & Robinson.
James P. Hall,	Kentucky,	Drs. Rogers & Johnston.
Thomas E. Holliday,	Tennessee,	Dr. John R. Moore.
Thomas B. Hendley,	Tennessee,	Wm. K. Bowling, M. D.
George Halcomb,	Kentucky,	William K. Bowling, M. D.
Andrew J. Hay,	Indiana,	Dr. A. P. Hay.
Nathan Q. Hall, M. D.,	Indiana.	
John M. Harwell,	Tennessee,	H. Jordan, M. D.
Lawson B. Hickman,	Mississippi,	C. T. Overton, M. D.
Alfred Hurst,	Kentucky,	Drs. Carter & Blackburn.
William B. Hall,	Tennessee.	
Samuel Haynes,	Kentucky,	Dr. R. Lockhart.
James W. Howard,	Alabama,	Practitioner.
John B. Henderson,	Mississippi,	W. Dorsey, M. D.
Thomas S. Head,	Mississippi,	Drs. Walker & Cunningham.
Claude L. Hemans,	England,	Daniel Drake, M. D.
John A. Ingels, M. D.,	Kentucky.	
Daniel Ingels,	Kentucky,	Thomas H. Vance, M. D.
Solomon Jackson,	Indiana.	W. B. Goodhew, M. D.
Humphrey M Jones,	Kentucky	John E. Cooke, M. D.

Names.	*Residence.*	*Preceptors*
William Johnson,	Kentucky.	
Charles H. Jennings,	Georgia,	W. L. Chamblin, M. D.
William P. Jones,	Kentucky,	Dr. T. Q. Walker.
John L. C. Johnston,	Kentucky,	Dr. William B. Johnston.
Zophar Jayne,	Illinois,	Practitioner.
Andrew J. Kirby,	Alabama,	J. A. Morrison, M. D.
James Kelly,	Illinois,	J. C. Bennett, M. D.
James Kyle,	Alabama,	Thomas Watkins, M. D.
David Keller,	Alabama,	Drs. Keller & Newsum.
Henry T. Ketcham,	Indiana,	D. H. Maxwell, M. D.
Peyton M. Keith,	Kentucky,	Dr. A. D. Keith.
William G. Keith,	Kentucky,	Dr. A. D. Keith.
Samuel D. Kennedy,	Mississippi,	J. M. Quin, M. D.
Robert E. Lanier,	Alabama,	William A. Sykes, M. D.
Josiah Long,	Kentucky,	Drs. John & William Long.
Oliver Lewis,	Missouri,	Dr. J. M. Wood.
Laban E. Laird,	Mississippi,	Drs. Crump & Young.
James O. Lewis,	Tennessee,	A. Jackson, M. D.
Wm. R. S. Murray, M. D.	Kentucky.	
Guy S. Miles,	Kentucky,	William Dodd, M. D.
William E. Murphy,	Alabama,	J. McDonald, M. D.
Thomas C. Mercer,	Kentucky,	Lewis Rogers, M. D.
David M. Murdock,	Tennessee,	J. W. Richardson, M. D.
James G. McMechan,	Indiana,	William R. Winton, M. D.
Eli J. McGavic,	Kentucky,	Drs. Eckles & Swain.
James H. McFarland,	Tennessee,	L. N. M. Cooke, M. D.
Isaac P. Morgan,	Indiana,	Daniel Morgan, M. D.
James A. Maxwell, Jr.	Mississippi.	
Wesley M. Mixon,	Mississippi,	Dr. R. Owen.
Jesse S. McClain,	Tennessee,	Dr. A. H. King.
James L. Mabry,	Tennessee,	Dr. J. G. Barksdale.
Wade A. Morris,	Tennessee,	Dr. A. G. Henderson.
Temple P. Massie,	Missouri,	Practitioner.
Felix McFarland,	Tennessee,	B. W. Avent, M. D.
George L. McAfee,	Kentucky.	William H. Stockwell, M. D.

Names.	*Residence.*	*Preceptors.*
Amzi Martin,	Kentucky.	Louisville Marine Hospital.
James Morrison, M. D.	Illinois.	
Andrew Moore,	Alabama,	W. W. Stewart, M. D.
Alfred Millikin, M. D.	Alabama.	
Benjamin F. Newsum,	Alabama,	W. H. Newsum, M. D.
Robert S. Newton,	Ohio,	C. L. V. Bureau, M. D.
William C. Morriss,	Virginia,	Dr. J. R. Creal.
Joseph F. Nichols,	Kentucky,	Dr. J. F. Fletcher.
Abram B. Owen,	Kentucky,	Drs. Taylor & Berry.
Thomas C. Osborn,	Tennessee,	Dr. William T. Eatherly.
William Powell,	Mississippi,	J. M. Towns, M. D.
Claibourne Pirtle,	Kentucky,	Lewis Rogers, M. D.
Robertus C. Phillips,	Kentucky,	Dr. W. Stewart.
Richard W. Pettway,	Mississippi,	H. Broadnax, M. D.
Francis A. Rice,	Tennessee,	Thomas R. Jennings, M. D.
William H. Rich,	Kentucky,	Dr. Newton Lane.
Thomas L. Rives,	Tennessee,	Drs. Mayfield & O'Brien.
Jordan W. Richardson,	Tennessee,	Dr. S. Richardson.
Francis S. Read, Jr.	Kentucky,	Drs. Campbell & Alcorn.
Samuel B. Robison,	Tennessee,	Practitioner.
David C. Ross,	Alabama,	Drs. Dunklin & Lavender.
Ebenezer Rondeau,	Illinois,	William Sim, M. D.
Benjamin F. Russell,	Kentucky,	E. C. Drane, M. D.
Alfred J. Reed,	Mississippi,	S. Feamster, M. D.
John J. Speed, M. D.,	Kentucky.	
William Simmons,	Alabama,	L. P. Yandell, M. D.
John D. Sale,	Alabama,	Drs. C. & T. L. Caldwell.
Granville P. Smith,	Tennessee,	Robert Martin, M. D.
James W. Starnes,	Tennessee,	J. W. Richardson, M. D.
Norborne D. Spotswood,	Illinois,	Wm. A. W. Spotswood, M. D.
Essex P. Spurrier,	Kentucky.	

Names.	*Residence.*	*Preceptors.*
Joseph Saudek,	Louisiana,	Dr. Stein.
Robert S. Strother,	Kentucky,	Burr Harrison, M. D.
Benjamin F. Smith,	Tennessee,	John R. Moore, M. D.
Hiram B. Stubblefield,	Tennessee,	Drs. Hill & White.
Richard G. Stockton,	Kentucky,	J. W. Hall, M. D.
S. Oglesby Scruggs,	Alabama,	Dr. W. H. Coleman.
William Snodgrass,	Mississippi,	Drs. Jackson & Crump.
Archibald S. St. Clair,	Kentucky.	
Thomas J. Sale,	Kentucky.	
John Truman,	Ohio,	Practitioner,
Alfred L. Towles,	Virginia,	Landon C. Rives, M. D.
John G. Tuttle,	Missouri,	Dr. N. Kouns.
Joseph A. Trimble,	Alabama,	F. H. Anderson, M. D.
John W. Tunnell,	Indiana,	Dr. H. L. Ross.
Hezekiah Tirrell,	Tennessee,	Drs. Mayfield & Obrien.
Nimrod W. Thompson,	Tennessee,	J. W. Richardson, M. D.
Amasa S. Underwood,	Indiana,	Dr. Walker.
H. M. Wakefield, M. D.	Kentucky.	
Ezekiel F. Wilson,	Kentucky,	L. M. Hospital.
James J. Watts,	Missouri,	Dr. William B. Watts.
Thomas A. Webster,	Kentucky,	Dr. Robert Hodgin.
Abram Walling,	Kentucky,	Dr. T. L. McNary.
Alfred M. Wyatt,	Kentucky,	P. B. McGoodwin, M. D.
Cornelius Walke,	Ohio,	David Wills, M. D.
George W. White,	Tennessee,	Thomas R. Jennings, M. D.
Mercer D. Wilson,	Tennessee,	A. D. Cutler, M. D.
John R. Watkins,	Tennessee,	Drs. Watkins & Wilson.
Levi J. Woods,	Illinois.	
Edwin H. Watts,	Alabama,	John Dillard, M. D.
Tunstall Q. Walker,	Kentucky,	Dr. Charles Hays.
Edwin Wood,	North Carolina,	L. Wood, M. D.
William S. C. White,	Kentucky,	Drs. Taylor & White.
John C. Whitlock,	Kentucky,	John A. Steele, M. D.
Dandridge B. Wyatt,	Alabama,	Drs. Jones & Rivers.

Names	*Residence.*	*Preceptors.*
JOHN B. WALL.	Kentucky.	C. W. Barkshire, M. D.
JAMES K. WILSON.	Mississippi.	W. Wilson, M. D.
ROBERT S. WENDEL.	Tennessee,	Prof. Yandell, M. D.
HUGH H YOUNG,	Kentucky.	

In addition to the above catalogue, two practitioners, one from Kentucky and the other from Indiana, were regularly matriculated; not being able to attend the Lectures only a short time, their names have been omitted.

RECAPITULATION.

1.	From	Kentucky,	6
2.	"	Tennessee,	8
3.	"	Alabama,	3
4.	"	Indiana,	2
5.	"	Mississippi,	1
6.	"	Illinois,	1
7	"	Missouri,	1
8.	"	Ohio,	1
9.	"	Virginia,	3
10.	"	Louisiana,	1
11.	"	Georgia,	1
12.	"	South Carolina,	1
13.	"	North Carolina,	1
14.	"	District Columbia,	1
15.	"	England,	1
		Total,	34

RATIO OF INCREASE.

Number of the Class, first session, 1837—'8,	30
Second session, 1838—'39,	19
Third session, 1839—'40,	20

MEDICAL GRADUATES.

At a public Commencement, held in the Fourth Street Methodist Episcopal Church, on Tuesday evening the 10th of March, 1840, the Degree of *Doctor of Medicine* was conferred upon the following gentlemen, who had undergone satisfactory private and public examinations, and submitted approved Theses on the subjects annexed to their names.

1. David J. Alcorn, of Kentucky. Thesis on Cynanche Trachealis.
2. John L. Armington, of Indiana; on Delirium Tremens.
3. Charles W. Baker, of Missouri; on Intermitting Fever.
4. Leroy K. Branch, of Mississippi; on Congestive Bilious Fever.
5. Francis B. E. Brown, of Alabama; on Cynanche Trachealis.
6. Preston Capshaw, of Alabama; on the Fever which occurred on Elk River, Ala., during the summer and fall of 1839.
7. James H. Charlton, of Tennessee; on Abnormal Enlargements of the Uterus.
8. James M. Cromley, of Ohio; on Mania a Potu.
9. John. W. Fraser, of Tennessee; on the Physiology and Pathology of the Liver.
10. Norvin Green, of Kentucky; on Menstruation.
11. William B. Hall, of East Tennessee; on the Fevers which prevailed in some parts of East and Middle Tennessee, during the years 1838-'39.
12. Samuel Haynes, of Kentucky; on Milk-Sickness, as it occurs in the counties of Daviess, Ohio and Breckenridge, Ky.
13. John B. Henderson, of Mississippi; on Cinchona.
14. Alfred Hurst, of Kentucky; on Inflammation.
15. Zophar Jayne, of Illinois, on the radical cure of reducible Hernia.
16. Samuel D. Kennedy, of Mississippi, on Hysteritis.
17. Peyton M. Keith, of Kentucky; on Phlegmasia Dolens.
18. Laban E. Laird, of Mississippi; on Congestive Fever.

19. James Maxwell, Jr., of Mississippi; on the Topography and Climate of portions of Mississippi, Louisiana, and Arkansas, in Connexion with some of their Diseases.

20. Felix McFarland, of Tennessee; on Milk Sickness.

21. Andrew Moore, of Alabama; On Psoas Abscess.

22. Wade A. Morris, of Tennessee; on Congestive Fever.

23. Benjamin F. Newsum, of Alabama; on Bilious Remittent and Congestive Fever, as it occurs in the Tennessee valley.

24. Robertus C. Phillips, of Kentucky; on the Epidemic Fever which succeeded the Cholera, in the West of Kentucky, in the years 1833–'34.

25. William Powell, of Mississippi; on Oblique Inguinal Hernia.

26. Samuel B. Robison, of Tennessee; on Inflammation.

27. David C. Ross, of Alabama; on Puerperal Peritonitis.

28. John D. Sale, of Alabama; On Gastritis.

29 S. Oglesby Scruggs, of Alabama, on Malaria or Marsh Miasmata.

30. Granville P. Smith, of Tennessee; on the Qualifications of the Physician.

31. Richard G. Stockton, of Kentucky; on Syphiloid Affections.

32. Hiram B. Stubblefield, of Tennessee; on Nutrition.

33. Nimrod W. Thompson, of Tennessee; on Sympathy.

34. John Truman, of Ohio; On Lithotrity.

35. Tunstall Q. Walker, of Kentucky; on Puerperal Fever.

36. Edwin H. Watts, of Alabama; on Bilious Remittent Fever.

37. Thomas A. Webster, of Kentucky; on Puerperal Fever.

38. George W. White, of Tennessee; on the Pulse.

39. Ezekiel F. Wilson, of Kentucky; on the Bandage.

C. W. SHORT, M. D., *Dean.*

ADDRESS ON COMMENCEMENT DAY.

After the degree of *Doctor of Medicine* was conferred by the Hon. JOHN ROWAN, *President of the Board of Managers*, who gave to the Graduates a few words of impressive exhortation, Prof. DRAKE, by appointment of the FACULTY, proceeded to deliver a more extended DOCTORATE ADDRESS. As the INSTITUTE was founded and liberally endowed by the people of LOUISVILLE, the exordium of this discourse was directed to them: and as it shows the progress and prospects of the INSTITUTE the FACULTY have determined to attach it to the Catalogue.

CITIZENS OF LOUISVILLE! Our English ancestors indulged themselves in a yearly festival, called *Harvest-home*. You have been invited this evening to "a harvest-home" of your Medical Institute—to the third annual return of the husbandmen, to whom in 1837, you confided the cultivation of the field, which you then enclosed and planted. The first year it yielded 24 ripened sheaves, the second 27, the third 39, which are now in shock before you. This increase is encouraging, but that of the plantings has been still greater. The first session your laborers cultivated 80, the second 120, the third and last 204.

It is not exactly known, how many students of medicine were in attendance the past winter, in all the schools of the Union, but according to professor Beck's statistics, the average, for the seven years preceding the last, was 2,300—for the latter three of that term 2,360. We may admit an increase of 90 for the session now closed, and assume 2,450 as the aggregate in attendance last winter. Now a twelfth part of this number,—of all the students who attended lectures in the United States last winter, prosecuted their studies in Louisville, where not one was educated by lectures three years ago; but those who resided there, went to other cities for that purpose.

What is the number of our rival schools? Twenty-four:—and if the whole number of pupils, 2,350, had been divided equally, each would have had but 98. It appears then, that your institution has had more than double her equal share—that is 204, instead of 98. Is it the greater age of the Institute which has drawn to it twice the number she would have had under an agrarian distribution! Certainly not:—for of 24 rivals, but three were younger than herself, while 21 were older.

What is her relative rank among these competing institutions? The University of Pennsylvania, as heretofore, stands first, Transylvania second, the Medical Institute of Louisville third! Yes, citizens of Louisville, you have founded and endowed a school which, in less than three years, has outstripped 19 older establishments, becoming the third in America, and would have been the second, if that second had not, also, been a Kentucky school! The two schools of this State have, together, 460. It is, in medical education, the second State of the Union:—The Keystone State, with her three schools, has but 200 more, the Empire State, with her four, is much behind, and the Ancient Dominion, with her two, is so far in the rear, that it would be disrespectful in her daughter to mention the distance.

The growth of your Institute is, indeed, without precedent. In the third session up to 204! Why, it was 20 years before the University of Pennsylvania attained to that number; 20 before the Fairfield school, in

the State of New York, arrived at it but to fall, in a short time, far below; almost as long before the University of Maryland reached it, and then could not maintain the elevation; nine years before the Jefferson College attained it, since which she has sunk far below; and seven years before it was reached by Transylvania University. None of the other schools of the Union ever attained that number—but few of them are now increasing, and several are on the decline.

To what should this unanticipated and cheering growth be ascribed? I would answer, first, to the geographical position of Louisville, one of the most eligible in the United States for this object; second, to the important advantages afforded by her hospital; third, to the enlightened policy of her citizens, in their corporate capacity, making the appropriations necessary to bring her natural advantages into requisition; fourth, to the discontinuance of the Medical department of the Cincinnati College. Last year, 1838—'39, the two schools in Cincinnati had 216 students, and Louisville 120—difference nearly 100 in favor of Cincinnati: this year Louisville has 204, and Cincinnati, by report, (for no Catalogue has been published) about half that number. It will be the *fault* of Louisville if she do not, for an indefinite time, keep a head of Cincinnati. Neither city, however, should strive to keep the other back, but each should aim to advance itself in honorable rivalship.

Can Louisville hope to overtake Lexington, the *ancient* seat of Western Medical education? In the first session of your school, the difference between it and Transylvania, was 147 in favor of the latter—in the second session it was 91, reduced 56—in the third and last, it was 52, reduced 39. Thus nearly two-thirds of the original difference has been already sunk. Now, Transylvania has never risen higher than 281, and her average for the last 15 years is 228. In the last session she was 28 above this average, and within 25 of her maximum in 1825, when there was but little competition in the West. Her condition, then, would seem to be *conservative*, while that of your institution is *progressive*. If this be true, you may hope ere long to see *your* school the second in the Union.

It must have been under the influence of this hope, that the Institute was founded. A lower expectation could not, ought not to have brought out from the treasury of the city, the noble appropriation on which it rests. Some schools are provincial,—in their advantages limited—in attractions feeble—in fame local. Such is not the destiny which, from the hour of its birth, the auspices have pronounced for the Institute. Over the entire West the profession, *una voce*, have predicted its future eminence. Although bearing its mother's name, it is not a school for the city and neighborhood, nor even for the State, from which its corporate powers are derived. Thirteen other States—half the Union—have already become tributary to its growth; and the tongue of prophecy, in language not to be misunderstood, has pronounced that, guided by wisdom and impelled with energy, it will rapidly expand into a *national* Seminary; in which the various branches of a profound and liberal medical education will be taught as efficiently as in the oldest Universities of Europe.

Founders of the Institute! In the midst of this feasting and exultation of the soul, I see a "hand writing on the wall!" True—it is not *mene mene tekel*, but if suffered to appear and pass away unheeded, that appalling inscription may at last take its place. I hope it is seen by every one—"Let him that thinketh he standeth, take heed lest he fall." If this be not a sentence of *premonition*, it is at least a precept of *admonition:* a portion of the wisdom which cometh from above; and was never yet disregarded by mortal man, with impunity. You may ask, what is

we do to avert disaster and promote the growth of the Institute? The answer is at hand. Regard it as your daughter, and watch over it with the love and vigilance, which you extend to children when they commence life around you. You did not bring it into existence to create offices for favorites, but to benefit the city, the profession and society at large. Identify yourselves, then, with its dearest interests, and *resolve* that it shall rise into distinction. The influence of an enlightened public opinion alone, can be relied on to keep it in health and vigor. Such an opinion will act with power on managers, professors and pupils, all of whom, in their respective spheres, must do their duty, or it will not enjoy permanent prosperity.

My impression is, that its growth has been *dangerously* rapid, especially within the past year; and that extraordinary efforts will be necessary to carry it, in the fourth session, beyond what it was in the third. I am happy to know, that the Managers and Faculty are alive to this danger, and bent on doing all that may be in their power to maintain the continued advancement of the school. On the suggestion of the latter, the former have resolved to purchase the valuable anatomical museum of professor Cobb; they have also, determined to expend the residue of the fund put at their disposal by the city, in the purchase of books and apparatus, and have appointed, as their agent, the learned professor who stands before the community as the founder of the school.*

The Faculty, on their part, have founded a Cabinet of Pathological Anatomy, designed to illustrate the various forms of disease; they have established a monthly journal of Medicine and Surgery, by which they will make themselves better known throughout the West and South, while it will contribute, to carry from *Louisville*, the discoveries and improvements of the day, to many remote physicians who might not otherwise become acquainted with them; finally, regarding the Hospital as the right arm of the Institute, they have, with the sanction of the Visitor and Council, determined to build, at their own expense, an operating and lecture room, for clinical instruction.

All this, and all that had been previously done by the city, the Managers and the Faculty, is as it should be—nothing superfluous, nothing ostentatious, nothing, indeed, not indispensable to full and efficient courses of instruction. But at last, it is not edifices, and apparatus and hospitals; nor advertisements, nor the boastings of vain-glorious Commencement-speeches, that build up great schools of medicine; *but the men who administer in them as professors.* The students of all the isles of ancient Greece assembled around Hippocrates; the greatest medical school of Europe, 160 years ago, was in the little Dutch city of Leyden, because that was the residence of Boerhaave—who drew to his lectures even Peter the Great of Russia; afterwards Gottingen, in one of the petty principalities of Germany, was made a centre of attraction by Haller; while Monroe, by the fame of his teachings, collected upon the bleak and barren rock of Edinburg, a large portion of the pupils of every part of the British Empire. In our own country, the genius of Shippen and Rush give impulse and character to the University of Pennsylvania, while they and their distinguished colleagues, still lectured and demonstrated, in private houses; the largest class which Transylvania ever had, assembled in the bar and ball-rooms of a deserted tavern; and she is

*Indisposition at the proper time of departure prevented Dr. Caldwell from going, but the importation will be made in a different mode, by the opening of the next session.

now upheld, in her acknowledged respectability, in no small degree, by the reputation of one of her professors.

It is mind, then, and not matter, on which the chief reliance must be placed. The genius, learning, energy, address and didactic eloquence of the professors, are the true and universal elements of success: *with them* no school can be kept back—*without them* no school can be put forward. Of what value are the sinewy warhorse instinct of blood, and the tough shield and glittering spear, if the rider be ignorant and clumsy! It was not the number and speed of his ships, both insignificant, that enabled Columbus to pass over the Atlantic Ocean—till then the "valley and shadow of death" to all civilized nations—and to plant her standard on the shores of a new, I would say (not irreverently) "a better world." Without *such* a commander, that fleet of discovery might have equalled in number and equipment, the "invincible armada," with which Philip of Spain invaded England, and yet the results have been equally inglorious. Some of the most brilliant discoveries of modern Chemistry, were made by Dr. Priestley, with a little piece of apparatus placed on one of the window sills of his parlour; and the inventor of French porcelain was so badly supplied with means, that he broke up his last bedstead, and used it for fuel in the prosecution of his experiments.

Intellect is to a school of science what the principle of gravitation is in the solar system, an attracting and regulating power:—what the sun in spring time, is to the earth and air and streams, which it warms and adorns with countless forms of life and beauty. Deeply impressed with these truths, the professors realize that a precious trust has been confided to them; and so far from relaxing, in consequence of their great success, they feel and admit an absolute necessity for redoubled diligence, and will aim, by efforts the most untiring, and a devotion the most intense, to promote the continued advancement of the INSTITUTE.

FOURTH SESSION OF THE MEDICAL INSTITUTE OF LOUISVILLE.

The President and Managers of the *Medical Institute of Louisville* have the satisfaction of announcing to the public the continued growth of the school committed to their guardianship.

The magnificent edifice, erected by the liberality of the people of Louisville, and pronounced by many medical travellers one of the most extensive in the United States, is now completely finished and furnished. Of its twenty apartments, three are lecture rooms, each capacious enough to seat 4 or 500 pupils.

Since the last session, the Managers have purchased the valuable Anatomical Museum of Prof. Cobb, and added to it a number of new and rare specimens from Europe. A Cabinet of Pathological Anatomy has been founded. The collection of models, instruments, *morbid* and apparatus in Surgery and Obstetrics, is unusually extensive and complete. The Chemical apparatus has been augmented, since the last session, by the arrival of new purchases from Europe; and important additions have also been made to the Library from the same source. The Cabinet of Materia Medica and Medical Botany is one of the most complete in the whole country. In short, the Managers do not hesitate to say that the most ample means of instruction have been provided for every department of the school.

The Louisville Marine Hospital affords to the Professors of Clinical

Medicine, Pathological Anatomy and Surgery, the means of enriching their lectures with numerous practical facts. The students spend six hours a week in its wards.

The chair of Surgery, vacated by the resignation of Dr. Flint, has been filled by the appointment of Dr. S. D. Gross, late professor in the Medical Department of the Cincinnati College. Dr. Gross is widely and advantageously known, as a writer on Surgery and Pathological Anatomy; is in extensive practice, and has proved himself an able and acceptable teacher: the Managers therefore have full confidence, that he will amply satisfy the expectations of all who may enrol themselves as pupils of the school. His very valuable collection of morbid specimens, the basis of his late and popular work on the *Elements of Pathological Anatomy*, will enable him to illustrate his lectures in the most instructive manner.

The candidate for the degree of Doctor of Medicine must have attained the age of 21 years, and be of good moral character: must have been engaged in the study of medicine at least two years; and have attended two full courses in some respectable medical school, the last of which in this;—provided, however, that four years' reputable practice will be received in lieu of the first course of lectures. The candidate must, also, pass satisfactory private and public examinations, and write and submit to the Faculty an acceptable Thesis, on some subject relating to Medicine, in the English, French or Latin language.

By order of the Managers.

JOHN ROWAN, *President*, &c.

MISCELLANEOUS NOTICES.

New Charter.—The last session of our Legislature gave to the Medical Institute of Louisville, a new charter, in which the power to confer the degree of *Doctor of Medicine* (previously exercised under a sound construction of the law of 1835) was given in express terms.

Professor of Surgery. For the information of distant students, the Faculty think it proper to extend a little, what the Managers have said of the newly appointed Professor of Surgery, Dr. Gross. This gentleman commenced his career as a public teacher in 1833, when he was invited by Dr. Eberle from Pennsylvania to take the office of *Demonstrator of Anatomy*, in the Medical College of Ohio. His accurate knowledge of the science, his skill in dissection, and his facility in lecturing, gave him immediate reputation; and, in 1835, when the Medical Department of the Cincinnati College was instituted he was unanimously appointed professor of *General and Pathological Anatomy, Physiology and Medical Jurisprudence*, which chair he filled, with distinguished success, till the departmet was suspended in 1839.

Dr. Gross entered on the duties of the profession, as a surgeon and physician in 1828, and has for some time been in extensive practice; but in the midst of professional duties, in the comparative short period of twelve years, he has been enabled to prepare for publication the following works: many of which have been widely circulated among the profession.

Translations.

1. A *Manual of General and Pathological Anatomy*. From the French of A. L. J. Bayle & H. Hollard. Philadelphia: 1828.

2. *A Manual of Obstetrics.* From the French of Julius Hatin. Philadelphia: 1828.

3. *A Treatise on Contagious Typhus.* From the German of J. Van Hildenbrand. New York: 1829.

4. *Elements of Operative Surgery.* From the French of A. Tavernier. Philadelphia: 1829.

ORIGINAL WORKS.

1. *The Anatomy, Physiology and Diseases of the Bones and Joints.* Philadelphia: 1830.

2. *Elements of Pathological Anatomy*, in 2 vols. Boston, 1839.

The last work, although not published till near the end of the year 1839, has already been made a text book in four Medical schools. It may be said to embrace the *Institutes of Surgery.*

In addition to these different works, Prof. Gross is the author of several papers in the journals of the day, one of which is an original inquiry into the signs and morbid appearances, in cases of death from *manual strangulation.*

MEDICAL INSTITUTE OF LOUISVILLE.

The Lectures in this institution will commence on the first Monday in November, and terminate on the first of March, when instruction will be given on the following branches, viz:

Anatomy, - - - - - - - - - -	by *Dr. Cole.*
Institutes of Medicine and Medical Jurisprudence,	by *Dr. Caldwell.*
Theory and Practice of Medicine, - - -	by *Dr. Cook.*
Surgery, - - - - - - - - - -	by *Dr. Gross.*
Obstetrics and the Diseases of Women and Children,	by *Dr. Miller.*
Materia Medica and Medical Botany, - -	by *Dr. Short.*
Chemistry and Pharmacy, - - - - -	by *Dr. Vanden.*
Clinical Medicine and Pathological Anatomy, -	by *Dr. Drake.*

The fee for each ticket is $15, in payment of which the paper of good and solvent Banks of the States in which the pupils respectively reside, will be received at par. The Matriculation fee, which is $5, and the Graduation fee, which is $20, must be paid in funds equal to the par of Kentucky. The Dissecting ticket is $10, which students may take or decline at their option, but on account of the utility of dissections, and the uncommon facilities afforded for their prosecution in this city, the Faculty recommend all pupils to avail themselves of it, at least during one of their courses.

Comfortable boarding, including fuel and lights, in respectable families may be procured at from $3 to $4 per week.

By order of the Faculty.

C. W. SHORT, M. D., *Dean.*

THE

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EDITED BY

DANIEL DRAKE, M.D.,

AND

LUNSFORD P. YANDELL, M.D.,

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COLLABORATORS.

EDWARD H. BARTON, M. D. *Professor of the Theory and Practice of Medicine, in the Medical College of Louisiana.*

WILLIAM J. BARBEE, M. D. *Georgetown, Ky.*

GEORGE W. BAYLESS, M. D. *Dissector for the Pathological Cabinet of the Louisville Medical Institute.*

A. H. BUCHANAN, M. D. *Columbia, Tennessee.*

CHARLES CALDWELL, M. D. *Professor of the Institutes of Medicine and Medical Jurisprudence, in the Louisville Medical Institute.*

SAMUEL A. CARTWRIGHT, M. D. *Mississippi.*

A. CLAPP, M. D. *New Albany, Indiana.*

JEDEDIAH COBB, M. D. *Professor of Anatomy, in the Louisville Medical Institute.*

JOHN ESTEN COOKE, M. D. *Professor of the Theory and Practice of Medicine, in the Louisville Medical Institute.*

SAMUEL D. GROSS, M. D. *Professor of Surgery in the Louisville Medical Institute.*

JOHN HARDIN, M. D. *Munfordsville, Ky.*

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JOHN F. HENRY, M. D. *Bloomington, Illinois.*

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HENRY MILLER, M. D. *Professor of Obstetrics and the Diseases of Women and Children, in the Louisville Medical Institute.*

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CHARLES W. SHORT, M. D. *Professor of Materia Medica, in the Louisville Medical Institute.*

G. TROOST, M. D. *Professor of Chemistry and Mineralogy, in the University of Nashville*

AMASA L. TROWBRIDGE, M. D. *Professor of Surgery, Willoughby University, Ohio.*

JOHN A. WARDER, M. D. *Cincinnati, Ohio.*

WILLIAM WOOD, M. D. *Cincinnati, Ohio.*

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